

# THE AUTOMOBILE

WEEKLY

NEW YORK—SATURDAY, JUNE 4, 1904—CHICAGO

10 CENTS



The illustration features a vintage Packard motor car in an oval frame at the top. A circular library stamp from the 'LIBRARY OF CONGRESS' is placed over the car, dated 'JUN 5 1904' and 'PERIODICAL DIV.'. Below the car, three people are depicted in period attire: a woman on the left in a checkered dress and hat, a woman in the center wearing a large, light-colored bonnet, and a man on the right in a dark suit and cap. The word 'Packard' is written in a large, elegant script across the bottom of the illustration.

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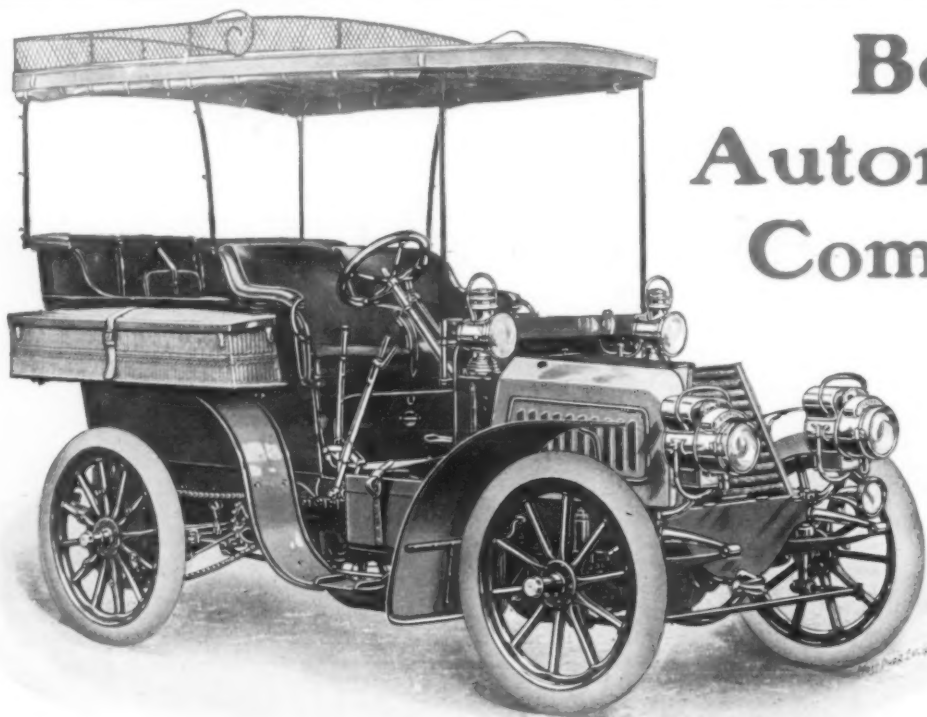
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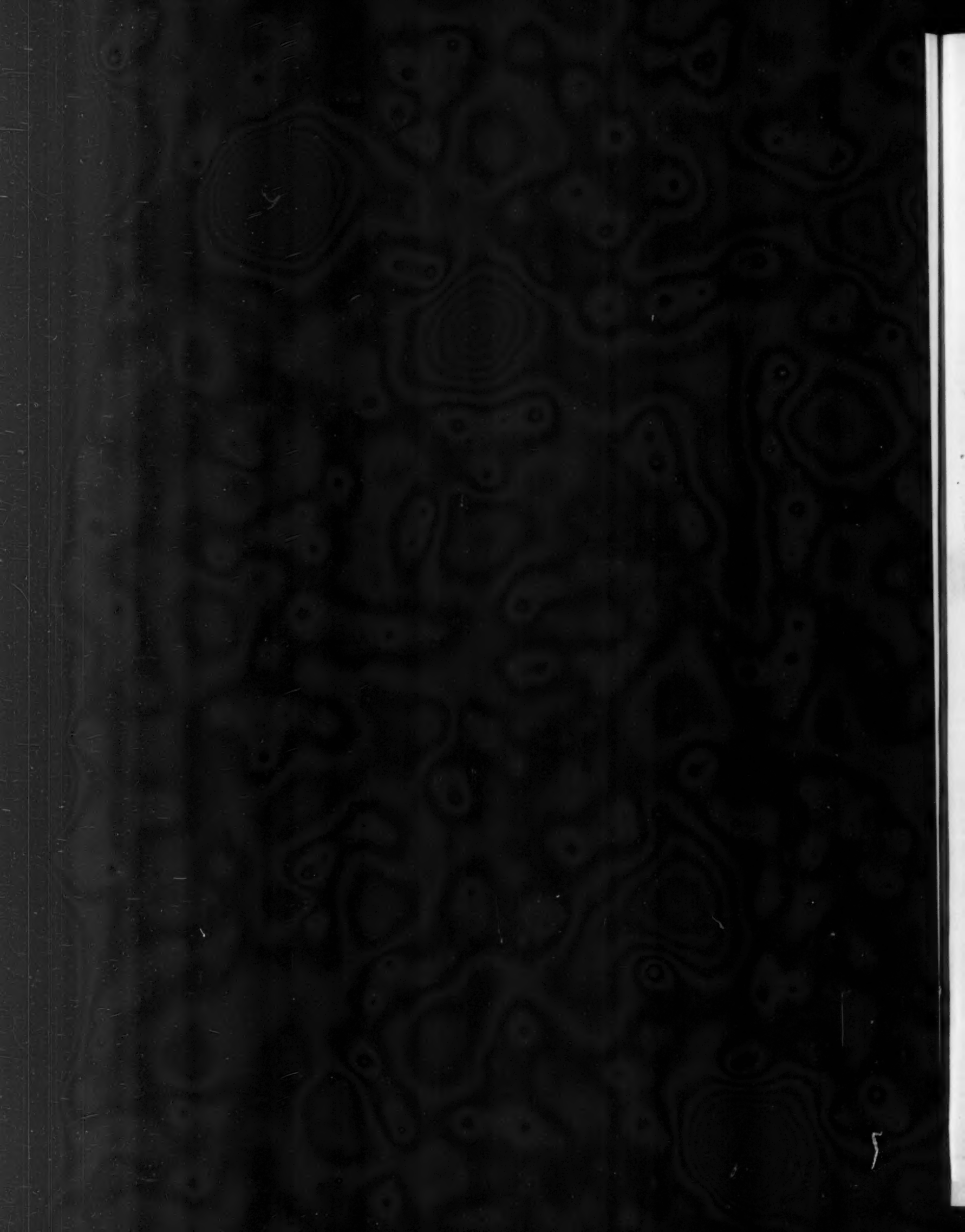
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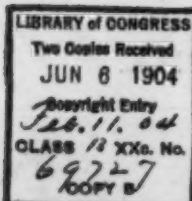
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## MASSACHUSETTS A. C. PARADE IN BOSTON.

### *Special Correspondence.*

**B**OSTON, May 28.—A splendidly successful automobile parade, in which nearly 380 motor cars were in line, was held this afternoon. It was not only the first representative parade of the kind in Boston, but was the largest automobile parade ever held in America, the number of cars participating exceeding by more than

a big turnout. It had been hoped that the event would bring out a good display of racing cars, even though they would probably have to be towed, because one of the principal objects in organizing the affair was to arouse general interest so as to insure a large attendance at the race meet to be run by the club on Monday. But

ing cars, which are popular in Boston suburbs. As was to be expected, however, the greatest showing was made by the gasoline cars, of which there were about 300 all told.

The weather was ideal, and there was nothing to mar the pleasure of the occasion except a fresh west wind that raised clouds



LIGHT STEAM CAR SECTION IN THE BOSTON AUTOMOBILE PARADE MOVING DOWN COMMONWEALTH AVENUE.

150 the number in the New York and Chicago parades.

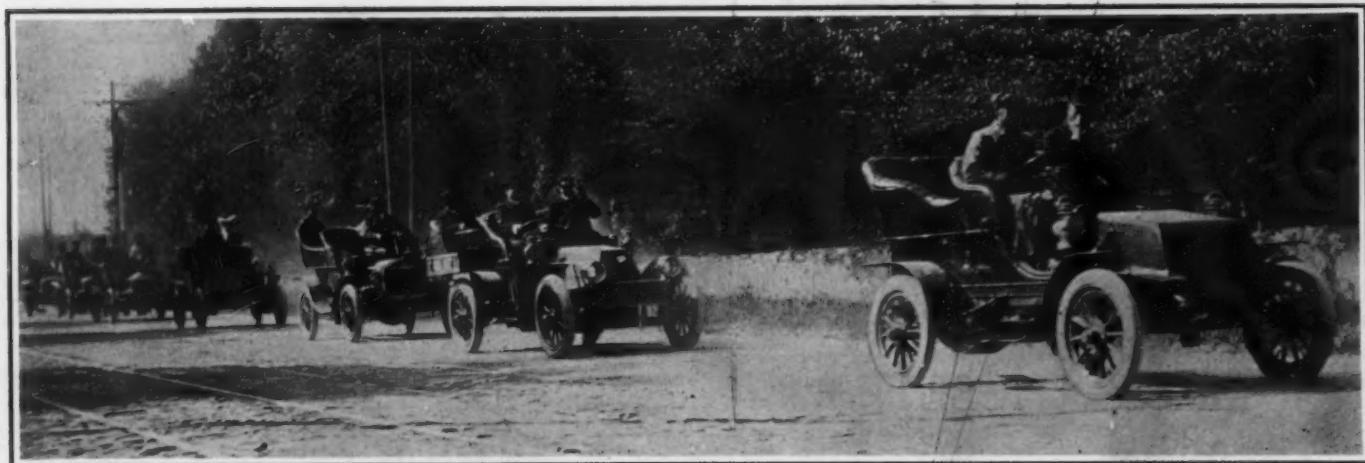
The affair was promoted and managed by the Massachusetts Automobile Club and the cars were mostly owned by members of the club and their friends, although the local agents assisted materially in securing

the racing men were too busy practicing with their cars on the track, and the only racing car in the whole line was the skeleton Pope-Toledo driven by Mr. Webb.

There was a surprising display of steam machines, particularly of runabouts, but including also a large number of steam tour-

of dust wherever the aristocratic Back Bay thoroughfares showed a dry spot, notwithstanding the city watering carts were constantly sprinkling them.

The parade, of course, attracted large crowds, and Copley Square, the street in front of the Public Library, Dartmouth



AMERICAN GASOLINE TOURING CAR SECTION IN THE PARADE OF THE MASSACHUSETTS AUTOMOBILE CLUB IN BOSTON.

street, Commonwealth avenue, and Beacon street were lined with interested spectators. Nearly half a hundred non-participating automobiles were gathered in the vicinity while the parade was forming.

The cars lined up by divisions in the thoroughfares leading out of Copley Square, President Elliott C. Lee, of the Massachusetts Automobile Club, who acted as chief marshal, taking up his position with Secretary Frederick Tudor, Jr., in the latter's electric runabout, in front of the library building, where the cars occupied by the special guests lined up. These guests were members of the Brookline Board of Selectmen, City Clerk Kingsbury, of Newton; Assistant City Clerk Priest, of Boston; Chief of Police Corey, of Brookline, in his runabout, with Captain Hall of the Back Bay police division accompanying Chairman William Wallace, of the club racing committee, who acted as assistant to Chief Marshal Lee.

#### THE STEAM RUNABOUT SECTION.

The makes numerically most prominent in line around the corner of the library building on Huntington street, where they choked Flagdon street so that other vehicles could not get through. Behind them was the steam touring car section, which was composed mostly of White machines. The light gasoline cars were lined up in Exeter street ready to turn into Huntington avenue directly behind the steamers; diagonally across Huntington avenue, in Irvington street, the American gasoline touring cars assembled. In St. Botolph street, leading out of Irvington, were the foreign gasoline touring cars, and while there were not many of them, they made a fine display. Many of the gasoline cars carried small blue pennants, bearing initials of automobile clubs from other cities, those from Newton and Lowell being most in evidence. The electric division, formed on Garrison street, just off St. Botolph, while the dealers' cars were grouped farther south on St. Botolph street.

With this carefully planned system of formation the big array of motor cars prepared itself for the line of march with almost no confusion. Everybody knew what he was to

do, and there were no hitches or accidents. When the hands of the clocks pointed to 2:30 p. m., the starting time, President Lee merely stepped into his car and started off, and the entire company of motorists took up the movement with absolutely no delay. It was an almost perfect management.

The procession moved in this order: First came three policemen from the Back Bay station (the division in which most of the automobile arrests are made) mounted on handsome black horses, which set the pace at a graceful center. Then came seven cars carrying the officers of the automobile club, the club committee, and guests, with the police captains. The various divisions of the parade followed in one unbroken string, as follows:

Steam runabouts, led by F. E. Stanley, 83; steam touring cars, led by George R. Alley, 50; light gasoline cars, led by W. H. Garland, Jr., 84; heavy gasoline cars, including foreign makes, led by L. R. Speare and Harlan W. Whipple, 87; electrics, led by C. H. Barney, 16; dealers' cars, light and heavy gasoline in the majority, 27; commercial division, 14 delivery vans and one heavy steam truck.

The route for the pleasure vehicles was through Dartmouth street to the south side of Commonwealth avenue up Commonwealth avenue to Arlington street, where they were joined by the commercial vehicles that were debarred from Commonwealth avenue, which is restricted to use by pleasure vehicles only. After the junction the entire line moved out Beacon street to Chestnut Hill reservoir, where it counter-marched to Huntington avenue and disbanded.

#### SPECIAL LIMIT ON THE AVENUE.

Although the speed limit in Commonwealth avenue is eight miles an hour, and dozens of the drivers in the parade had been held up there by the police for exceeding it, almost the entire gasoline section today went flying down the avenue at anywhere from fifteen to thirty miles an hour in order to close up some long breaks that had developed, passing policemen at every intersecting street. A bystander laughingly

asked one of the policemen in front of the Hotel Vendome why he didn't hold up some of the paraders who were breaking the law. The bluecoat gave the questioner a glance out of the corner of his eye, spat reflectively, gazed at the nearest machine as it went flying past his corner, and remarked, tersely, "To — with them! The cap'n's setting the pace, isn't he?"

Six women drove cars over the route, and one big touring car was occupied exclusively by women, five of them dressed all in white. One steam touring car was driven by Miss Mary Eustis, of Brookline, and a gasoline tonneau car was operated by Mrs. Miriam E. Johnson, of Boston.

#### MACHINES NUMERICALLY PROMINENT.

The makes numerically most prominent in the gasoline division were Knox, Olds, Stevens-Duryea, Pierce, Packard and Franklin cars. Prominent by reason of their imposing appearance and the brilliancy of their finish were several new styles of Peerless cars, one with side entrance tonneau and others with limousine bodies, in which the occupants sat entirely protected from the dust. Several Orient Buckboards attracted attention, two of them fitted with umbrella tops, one having two seats and another a luggage carrier behind. The electrics were mostly Columbia, Waverley and National runabouts, surreys, a brougham, a station wagon and two or three touring cars.

The commercial division did not make a very good showing and was not a fair representation of the business vehicles in use in Boston, largely for the reason that Saturday afternoon is one of the busiest times in the week for the automobile delivery wagons. The big electric trucks of the Edison Illuminating Company were conspicuous by their absence, although the company had two emergency wagons of the delivery type in line. The commercial cars were led by five Knox wagons, put in by a dry goods department store, a laundry, a baker, and other business houses. Then came two Oldsmobile delivery wagons, followed by two Crestmobiles. Three electrics from the Edison company followed, then a Waverley



electric delivery van, a handsome delivery car from the Columbia Motor Vehicle Company, and last of all a massive steam truck, moving along ponderously.

#### A LINE FOUR MILES LONG.

The parade occupied about three-quarters of an hour in passing a given point, but the leaders covered the route in a little more than an hour. The long procession made a fine display while passing along Beacon street, for when the head of the procession was making its countermarch at the Chestnut Hill reservoir, the tailenders were just leaving Arlington street, the parade stretching out in a straight line almost four miles long. No wonder Bostonians were impressed with the number of machines gathered together in the event.

After the parade disbanded at Copley Square, the Massachusetts Automobile Club

## Memorial Day Meet at Readville Track.

### Ten Thousand Bostonians Turn Out to Witness a Splendid Racing Program—Postponement Caused by Rain.

*Special Correspondence.*

**B**OSTON, May 30.—If rain did not fall on the just and the unjust alike it might have skipped over the beautiful one-mile oval in the shadow of the Great Blue Hill at Readville, where the Massachusetts Automobile Club undertook to hold its second annual automobile meet to-day.

Spectators came by thousands in special trains, in carriages, and in automobiles, expecting to see some great racing, and the racing cars and racing men were there, among them men of fame and experience on many other courses, but the unwelcome

Early arrivals at the track had their appetite for racing whetted to a keen edge by the fine work in warming-up the machines. Louis Ross was on the track with his curious turtle-backed steam machine, armored all over with metal plates and resembling in general appearance the Baker electric *Torpedo*, except for a draft pipe or stack projecting rearward like a torpedo tube. The car, which was operated by Mr. Ross, is rated at 20-horsepower, and as it tore around the track in practice spins it was evident that the steamers were again to be counted on for some fast time.

#### BARNEY OLDFIELD'S DEBUT IN BOSTON.

Barney Oldfield, direct from his racing at the Point Breeze track, Philadelphia, on Saturday, was also a figure of interest, and the gate keepers at the course had all they could do to keep stragglers from braving the danger of practicing racing cars to cross the track where Oldfield and his *Bullet No. 2* were preparing for the contests. Claude Fogolin, in his new Fiat 60-horsepower racer, the first of the make ever to be seen in an automobile contest in or near Boston, was pointed out with much interest, and his white car was an object of considerable curiosity.

#### TEN THOUSAND SPECTATORS PRESENT.

As the time drew on toward two o'clock, the hour for calling the first race, the faces of the club committeemen began to wreath themselves in smiles as they watched the throng of spectators grow. There seemed to be no doubt about the success of the afternoon. They knew that their card was one of the most attractive ever offered at an automobile meet, and as the crowds came surging through the turnstiles they felt that their efforts were about to be crowned with success. As the special trains drew up outside the fence behind the grandstand, the entrances were choked simultaneously, and in almost less time than it takes to tell, the track was fringed deep with ex-



VISITORS' CARS IN THE INFELD AT THE READVILLE AUTO RACES.

kept open house, and a large number of the paraders and many visiting automobilists from New York and New England cities spent an hour or two there talking over the success of the affair, discussing the chances of their favorites in the race meeting the following Monday, and looking over the handsome cups offered for competition at the Readville track. The handsome silver loving cup offered by Harry Fosdick for the fastest mile made at the meeting, open to all except Winton competitors, was noted with interest. Another much-talked-of trophy was that offered by the *Boston Herald*, to become the property of the contestant winning it twice in open events.

IN VIEW of the Panhard "flop" to shaft drive in their cup racers, it is rather interesting to note that only three machines out of ten finishing in the French Elimination Trials had that system of transmission, while all of the cup team have side chain drive. Not less interesting, though more amusing, was the guessing competition of an automobile firm anent the same trials. Nine out of ten guessers gave first place to Rigolly; and yet none of the Gobron-Brillié cars finished!

rain came, too. And when it arrived, everything had to stop. The track, which had been fast and sure, in spite of its unbanked turns, for almost a week of automobile practice, turned thick and greasy inside of half an hour; and with only three heats of some minor events run off, the management was obliged to declare the races postponed and announce a free meet to run them off on Saturday, June 4.



MECHANICS GETTING RACING CARS READY FOR THE READVILLE EVENTS.



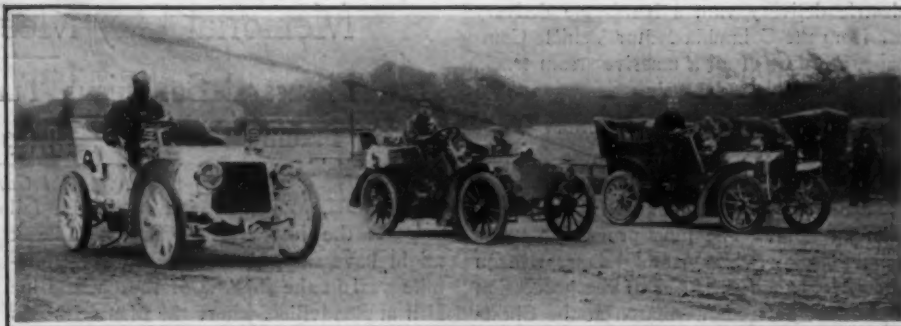
pectant humanity up and down the home-stretch from turn to turn, the infield was crowded for almost as great a distance with automobiles and a few horse-drawn carriages and tally-hos; the admission benches were filling up; and in the grandstand alone more than 1,000 seats had been filled. It was a scene of life and animation everywhere. Success was in the air. The spectators' automobiles alone made a great show, and were a feature that was appreciated in the utmost by many of the novices present. Taking the cars packed close in the infield, near the rail, and those clustered in a group on a mound northwest of the timers' box, and the total was not far from 250. The club treasurer, Royal R. Sheldon, estimated the number of people at the track at easily 10,000, and this was apparently a conservative figure.

#### NAGEL WINS FIRST EVENT.

There was no hitch about starting the racing. The first event called was the five-mile for gasoline touring cars not exceeding 24-horsepower. George Otis Draper, of Hopdale, had offered a prize of silver plate and the club had offered another. This event brought together W. Nagel in a 24-horsepower Fiat, George Otis Draper in a 22-horsepower Packard, Charles J. Donahue in Harlan W. Whipple's 20-horsepower Mercedes, and H. L. Bowden in his 24-horsepower Mors, in the first heat. As they got away, after several trials, Mr. Bowden jumped his car slightly to the fore, with Mr. Nagel close behind, Mr. Donahue third, and Mr. Draper fourth. Mr. Draper's Packard was the tortoise of the race, however, for its clutch was slipping badly, and the driver himself was smiling grimly as he moved sedately past the grandstand and caught the sound of laughter from the more observant spectators. He withdrew before reaching the quarter. It was noticed also that Mr. Bowden had been unable to get the Mors going properly, and he pulled out before making the first turn. In the meantime Nagel had forged ahead with his Fiat, and without showing any great amount of daring on the unbanked turns, was leading Donahue in the Mercedes by two or three lengths. That was the relative position of the two as they finished the first mile, and although it appeared in the third that Donahue was about to pass the Fiat, he failed to do so. He rode a plucky race from one to four lengths in the rear of Nagel all the way through to the final mile, then, just before the finish, he closed up, and as the two shot across the tape the last dash of the Mercedes placed it within a length of the Fiat, which won the heat, in 7:17 3-5.

#### MORRISON WINS FROM WEBB.

In the second heat of this race, A. E. Morrison came out in a 24-horsepower Peerless to do battle alone with A. C. Webb in a 24-horsepower Pope-Toledo. It was by chance that these two touring cars were contesting alone in the heat, but it made the heat doubly interesting, especially when



START OF FIRST HEAT IN FIRST RACE AT READVILLE TRACK.

the rain later shut off the more exciting contests, for the reason that Mr. Morrison had challenged W. E. Eldridge, the local Pope manager, to a match race between these same stock cars; and, as events turned out, the heat was taken as an indication of how that match would be likely to result. As the two got away, Mr. Webb, though on the outside, obtained a slight advantage, but Mr. Morrison wiped this out on the back stretch and assumed the leading position. His lead varied on the different miles, but he maintained it and finished first in 7:14 4-5. His greatest lead over his opponent was in the third mile, when he was fully a quarter mile in advance, but through the rest of the heat he led by about one-eighth of a mile, and finished with about that lead.

#### BASLE WINS HIS HEAT.

Following these two heats, the committee called the third race, a ten-mile open for all classes of motive power, for cash or plate prizes of \$250 and \$150. Only one heat was finished. This brought together Claude Fogolin, in the 60-horsepower Fiat, Louis S. Ross in the freak 20-horsepower Stanley steamer, and Charles Basle in H. L. Bowden's 60-horsepower Mercedes. It looked exciting and the crowd murmured appreciation as the three coughing and sputtering cars got away fairly well together. Basle took the lead at the start, with Fogolin slightly leading Ross; but the steam machine swung in ahead of the Fiat as the two rounded the turn, and from then on it was Mercedes, Stanley, Fiat through the whole nine laps. Distances between the contestants widened as the heat progressed, and at the end of five miles (time, 5:54 4-5) Basle was a quarter mile ahead of Ross, who was an equal ahead of Mr. Fogolin. Sprinkles of rain had already been sufficient not only to lay the dust which had risen in clouds just before the start of the races, but also to make the surface somewhat uncertain at the turns. It was noticeable that both Ross and Fogolin shut down on approaching the danger points, allowing the more daring Basle to increase his lead to one-third of a mile on the sixth lap, which he maintained to the finish.

#### FURTHER RACING POSTPONED.

Then the rain started in for a good, pelting shower, and the committee began to realize that the sport was over, so far as fast time

was concerned. Barney Oldfield brought out *Bullet No. 2* to do battle with J. W. Hillyard in a 40-horsepower Decauville and Otto Nestman in the Stevens-Duryea 14-horsepower *Spider*.

In the flying start Oldfield craftily held back until his opponents were near the tape and then opened wide the throttle, so that although the three cars crossed the line abreast the *Bullet* was making several times the speed of the others and immediately took the lead. The ruse was seen by Starter Gillette, who promptly called them back.

The turns of the track were by this time so slippery that Chairman William Wallace of the club racing committee took a turn around the track with Oldfield to see for himself how the track appeared. The car skidded greasily as it swung around the first quarter; and after completing the mile, with the wheels throwing up showers of mud all the way, the charioteers drew up at the tape covered with slime. After a twenty-minutes delay, ostensibly to see how the rain would come out, as the announcer stated, but really to make arrangements for a postponed meeting, the races were called off and the great crowd went rather disconsolately homeward.

#### OFFICIALS OF THE MEET.

The officers of the meeting were as follows: Referee, A. R. Pardington; judges, Harlan W. Whipple, George E. McQuesten, C. Fred Lyman, H. L. Hall; timers, The Chronograph Club of Boston; clerk of the course, Captain John S. Keenan; starter, C. H. Gillette; umpires, A. P. Underhill, E. A. Gilmore; race committee, William Wallace, George R. Alley, Gilmer Clapp and W. E. Eldridge.

The summary, so far as completed, stands as follows:

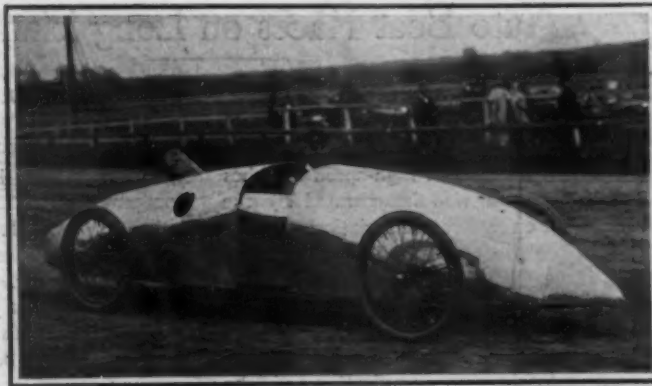
Five miles, for gasoline touring cars not exceeding 24-horsepower, car to be in full touring form—First heat, E. R. Hollander (24-horsepower Fiat), first; Charles J. Donahue (20-horsepower Mercedes), second. Time, 7:17 3-5.

Second heat, A. E. Morrison (24-horsepower Peerless), first; A. C. Webb (24-horsepower Pope-Toledo), second. Time, 7:14 4-5.

Ten miles, open for all motor powers, no restrictions—First heat, H. L. Bowden (60-horsepower Mercedes), first; Louis S. Ross



H. E. ROGERS IN 24-HORSEPOWER PEERLESS.



LOUIS S. ROSS IN 20-HORSEPOWER STANLEY STEAMER.

(20-horsepower Stanley), second. Time, 12:24. Time for five miles, 5:54 2-5.

#### NOTES OF THE MEET.

No one could have asked for better weather for automobiles than that on Sunday. The club had provided a programme to meet both the social and racing proclivities of its guests who thronged the

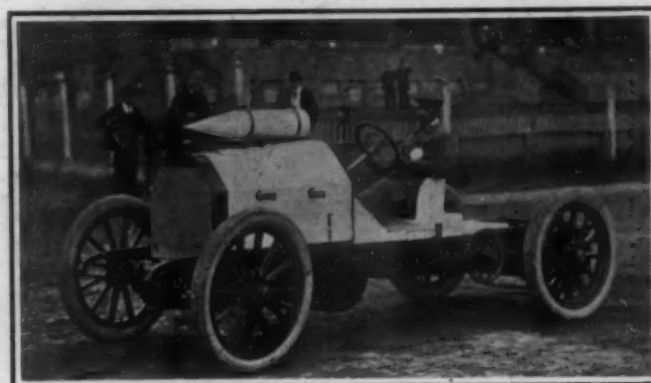
This track activity on Sunday came near marring the carnival this year with two fatalities, but the accident resulted in nothing more serious than the wrecking of a Pope-Toledo racer and a few yards of the track fence. A. C. Webb and Harry Marvel were riding on the ill-fated machine, and Webb was at the wheel. The car had been turning out some fast miles, as it has been

cut on the arm, but neither was badly hurt.

Barney Oldfield had trouble with *Bullet No. 2* when he brought it out on the track after arriving from Philadelphia early Sunday afternoon. He had traveled only two or three times around the track when he found that his racer was on fire. He stopped it at once, and quenched the flames before the body was more than scorched a little.



CLAUD FOGOLIN IN 60-HORSEPOWER FIAT.



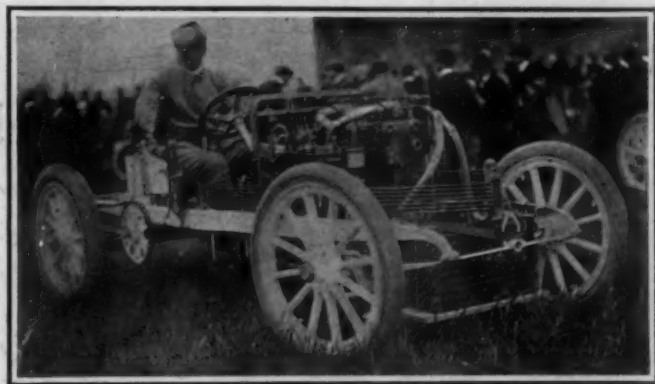
PAUL SARTORI IN A. VANDERBILT'S MERCEDES.

rooms in the morning to find out what was on foot as a means of killing time, while waiting for the races of the following day. A pleasant run out to the Wayside Inn at Sudbury, where there was luncheon and refreshments, had been arranged, but the track at Readville was the objective of the racing men, many of whom went there during the day to try out their machines and tune them up.

doing day after day during the week of practice. When it was within a few rods of the take-off on its last mile, traveling at a 1:10 clip, a tire burst on the right front wheel. Away went the car crashing into the fence at the turn, ripping off the boards and rails for two rods, and ending by turning completely over. Webb and Marvel were sent flying out before the overturn. Both were bruised and Marvel received a

The fire originated in the muffler pipe, which had been cracked in shipment, and the blaze worked its way to the carbureter.

ARNOLD TOMPKINS, principal of the Chicago Normal School, is now planning to spend his vacation in making a trip from Chicago to South Georgia by automobile, using his recently purchased White touring car.



H. L. BOWDEN IN HIS 60-HORSEPOWER MERCEDES.



H. B. PILLS, JR., IN HIS 40-HORSEPOWER BRASIER.



## Auto Boat Races on Long Island Sound.

### First Official Meet Under A. P. B. A. Auspices—Few Entries and no Startling Performances—The Winners.

THE actual racing of high-speed launches in America was inaugurated by the American Power Boat Association on May 30, with the co-operation of the Manhasset Bay Yacht Club. Prior to last year the racing of power boats, small and large, was occasional and desultory, but few events having any authentic standing as reliable records. With the organization of the American Power Boat Association last spring the racing of power craft was placed upon the same systematic basis as has long prevailed with sailing yachts, measurement rules and allowance tables being adopted, with such regulations as will insure reliable timing by disinterested judges over known courses. The few races run last year may be considered as merely preliminary; but

signed and built by the Electric Launch Company, of 26 feet 3 inches length and with a F. I. A. T. car motor of 35-horsepower, made a speed of 18.3 miles, also an excellent showing. While some of the paper records of last year remain unbroken, a good start has thus been made for the establishment of bona fide records of the speed of racing launches.

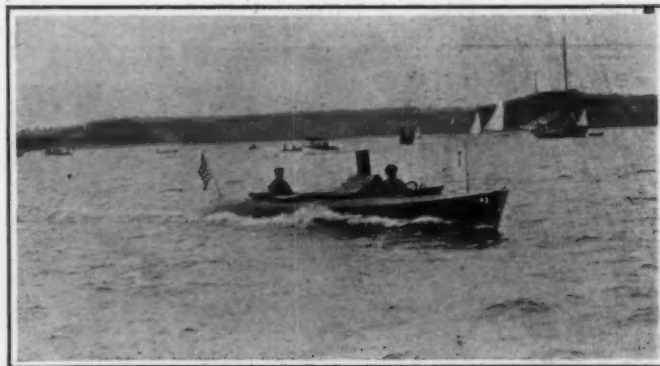
The audience was all that the most enthusiastic motor-boat crank could have desired, Commodore Bourne, of the New York Yacht Club, came up in the flagship *Delaware*, anchoring outside Manhasset Bay, and running in with the handsome mahogany steam launch to watch the start and finish. The steam yachts *Celt*, *Viking*, *Stellar*, *Carmen*, *Elsa II*, *Levanter* and

small open launches were everywhere, all classes, from the rough oyster skiff with her puffing two-cycle motor of junk up to the elegant mahogany yacht tenders and the fragile shells with the latest of high-speed motors. That there was no fatal accident was due only to good luck, as some of the speed launches were handled in the most reckless manner, while many of the outside launches were in the hands of incompetent helmsmen. One mix-up occurred, the three principals being Mr. Vanderbilt's *Hard Boiled Egg*, the *Panhard*, and a launch loaded with spectators. In stopping suddenly to avoid a collision with the other two the *Hard Boiled Egg* bent her rudder blade and made no attempt to start.

During the morning yachts and launches came in from all quarters, the *Standard*, with her engines overhauled during the winter and her hull replanked with mahogany, came across the Sound with a party of guests and after landing them at the clubhouse did "stunts" about the fleet. The



AUTO BOAT STANDARD WHICH DID NOT COMPETE.



AUTO BOAT PANHARD GOING AT SPEED.

for the present season the racing of both cruising steam yachts and small speed launches promises to take precedence over the sailing matches.

Much was expected of the opening race, as it has been known for some time that many speed launches were under construction; it must be said, however, that the result was a disappointment. That this was so is due entirely to those immediately concerned with the contesting boats. The arrangements for races on an extensive scale were very satisfactory. There was an entry list of some thirty craft, but when the time came the entered boats were either absent or failed to start. The total number of starters was but twelve, and as these were divided between seven different classes there was little real competition. The two important points of the race were that some of the new boats showed themselves capable of a sustained run of over one hour's duration, and that certain speeds were officially recorded. Over a tidal course in open but smooth water the Seabury launch *Japansky*, 39 feet long and fitted with a 40-horsepower "Speedway" motor, made a speed of 20.3 miles, which must be considered very satisfactory for a verified performance. Over the same course the *F. I. A. T. II*, de-

*Adelaide*, with many cabin launches from the different Sound ports were anchored on each side of the head of the course, which was just off the clubhouse of the Manhasset Bay Yacht Club. The cutter *Allure* and a few other sailing yachts were present, and auxiliaries without number, running about with sails under cover in spite of an enticing breeze in the early morning. The

blue-blooded *F. I. A. T. II*, steered by Mr. Tangeman in a swimming jersey and trunks, tore back and forth through the crowd of vessels at anchor and underway in a manner which may be best described as "throwing fits." The light mahogany hull was completely covered with a canvas hood, painted a deep blue and with the name on each side in big black letters, only



LOOKING DOWN THE PIER FROM THE CLUB HOUSE—AUTO BOATS ALONGSIDE.





MANHASSET BAY YACHT CLUB HOUSE WHERE AUTO BOAT RACES WERE HELD, MAY 30.  
The Automobile Club of America Has Secured the Privileges of the Club for the Summer.

the head of the engineer showing above this covering. The helmsman was seated directly abaft a section of copper tubing about 8 feet long and 8 inches in diameter, mounted horizontally over the bow, through which he looked, with his face close to the after end. The range of his

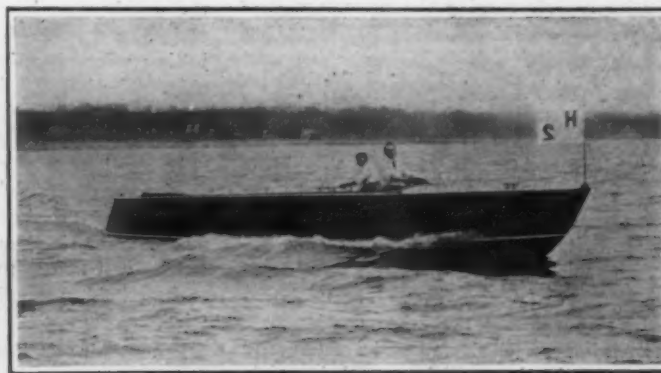
made but modest pretensions to racing speed.

The boats were measured in the morning, the start being set for 2:30 p. m. At that hour the tide was still flooding and the sky was cloudy, with no glare to dazzle the eyes of the helmsmen, while the light wind

the Gangway and Scotch Caps buoys, thence around the Matinnicock Buoy, thence by the Old Hen and Gangway buoys and in to the same line; 19.5 nautical miles or 22.5 statute miles. The course for the smaller boats was out by the Gangway Buoy, then around the buoys on Execution Reef, then back by the Gangway Buoy to the line; 9.5 nautical miles or about 11 statute miles. When the signal was given the *Standard* failed to start, so the second signal was given at 2:40 for Classes R and S. In the former was only the *Japansky*, and in the latter the *F. I. A. T. II.* and the *Shooting Star*, but as the *Panhard* had no competitor she went up into Class S. The *F. I. A. T.* was first away, followed by the *Shooting Star* and the *Panhard*, the *Japansky* being slow in crossing. The *Panhard* was handled by one man, her mechanism being operated from the forward cockpit where her steering wheel is located. As the operator understood only French and did not know the course, a member of the



AUTO BOAT FIAT II. GOING AT 18-MILE CLIP.



AUTO BOAT MISS SWIFT, WINNER IN CLASS H.

vision was thus circumscribed to a very small circle, making it a matter of no small danger in twisting about at full speed.

While some of the well-known boats failed to appear, there were several of which nothing was previously known, one of these, the *Japansky*, has just been completed by the Gas Engine & Power Company and Charles L. Seabury & Co., for F. H. Waldorf, of the New Rochelle Yacht Club. She has a handsome hull of the type built by this company during the winter, the outside finished in white enamel, with a "Speedway" motor. The boat was in perfect condition, with no evidences of hasty work on her. The Lozier Motor Company sent over an entirely new launch, the *Shooting Star*, from the works in Westchester, the boat having been launched on the preceding day and only prepared by hard work through the night. The hull, which was finished bright, was of white cedar, lapstrake, with a long straight entrance and flat run. The motor was of the type exhibited at the Sportsman's Show, the new "Auto-marine." The real speed boats were limited to the quartette *Japansky*, *Shooting Star*, *F. I. A. T. II.* and *Panhard*, the latter being the hull seen at the show; all the other starters

from the south left the water smooth, both within the bay and outside on the Sound. The course for the larger boats was from off the clubhouse out of the bay and past

Manhasset Bay Yacht Club volunteered to pilot him. Seated in the after cockpit, the pilot manipulated a pair of lines made fast to the starboard and port arms of the

#### OFFICIAL TIMES IN MANHASSET YACHT CLUB AUTO BOAT RACE.

##### CLASS R—START 2:40—COURSE 10½ MILES.

Name of Boat.	Owner.	Name of Engine.	Horse Power.	Rating.	Finish H.M.S.	Elapsed Time. H.M.S.	Corrected Time. H.M.S.
Japansky.....	F. H. Waldorf.....	Speedway....	40.99	70.65	3:46:29	1:06:29	1:06:29

##### CLASS S—START 2:40—COURSE 10½ MILES.

F. I. A. T.....	C. H. Tangeman.....	F. I. A. T....	35.17	65.05	3:53:23	1:13:23	1:13:23
Shooting Star...	H. A. Lozier.....	Lozier.....	24.30	62.06	Withdraw.		
Panhard.....	A. Massanet.....	Panhard.....	18.71	54.52	4:02:40	1:22:40	1:16:43

##### CLASS A—START 2:50—COURSE 10½ MILES.

Allure.....	Alex. Stein.....	Craig.....	58.90	50.97	4:32:06	1:42:06	1:42:06
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##### CLASS H—START 2:50—COURSE 10½ MILES.

Miss Swift.....	Robert Jacobs.....	Buffalo.....	26.09	56.07	4:19:57	1:29:57	1:29:57
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##### CLASS I—START 2:50—COURSE 10½ MILES.

Ardis.....	R. H. Haddock.....	Buffalo.....	10.81	45.54	4:41:16	1:51:16	—
Flash.....	Alex. Stein.....	Buffalo.....	16.22	44.74	4:55:10	2:05:10	—
Javelin.....	C. W. Lee.....	Standard....	16.36	41.50	4:56:35	2:06:35	—

##### CLASS C—START 2:55—COURSE 10½ MILES.

Queen Bess....	R. H. Stern.....	Standard....	27.14	34.65	5:11:29	2:16:29	2:16:29
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##### CLASS K—START 2:55—COURSE 9½ MILES.

Nada.....	C. A. Goddard.....	Giant.....	3.03	30.15	3:57:35	1:02:35	—
999.....	J. N. Schoonmaker.....	Sterling....	4.26	31.05	4:16:02	1:21:02	—

The winners were: Japansky, F. I. A. T., Allure, Miss Swift, Ardis, Queen Bess and Nada.

helmsman, thus indicating the proper course to be steered.

The four were soon out of sight, hidden by Barker's Point, the *Japansky* rapidly overhauling the leaders.

At 2:30 the start was given for Class A, the *Allure*, a handsome cabin cruising launch; Class H, the *Miss Swift*, an open pleasure launch; Class I, the open launches *Ardis*, *Flash* and *Javelin*. At 2:55 the start was given for Class C, *Queen Bess*, a big cabin launch with spars, and for Class K, *Nada* and 999, small open launches.

There was a wait of over an hour before the first of the returning boats was sighted, the *Japansky*, running very evenly and steadily, but with about four feet of her bow clear of the water; seven minutes later the *F. I. A. T.* came into view, and then after nine minutes the *Panhard* finished, the *Shooting Star* having given up.

Mr. Tangeman entered a protest against the *Japansky* on the ground that her measurement was incorrect. A protest was also filed by the helmsman of 999 against the *Nada* for improperly turning the Execution Reef buoys.

### Auto Boat Reliability.

With the object of proving to the naval authorities and public generally that boats with internal combustion engines are reliable and safe, the Automobile Club of Great Britain and Ireland will hold a reliability trial of motor boats on Southampton Water, July 26 and 27. The trial will consist in running the boats continuously for ten hours each day around a rectangular course; and points will be awarded as follows:

Reliability, 100, less one for each minute of stoppage.

Condition after trial, maximum, 100.

Speed, 50, less one for each tenth of a knot less than the fastest boat in the class.

Safety, maximum, 30.

Economy of fuel, maximum, 20. Two marks to be deducted for each 1-hp. of cost per horsepower per hour above the most economical boat in the class.

Each boat must carry fuel for the whole 20 hours' run, and can carry any number of passengers. The boats must have certificates of rating from the Marine Motor Association, and their horsepower and time allowances will be calculated from the M. M. A. formulas, which are substantially identical with those of the A. P. B. A. There will be five classes, as follows:

1. Yacht's dinghies, clench built, up to 15 feet over all.

2. Yachts' launches, up to 20 ft. over all.

3. Yachts' launches, up to 25 ft. over all.

4. Yachts' launches, up to 30 ft. over all.

5. Launches of over 30 ft. over all.

A launch, under rule 5, must have a cockpit at least 1-4 the length of the boat, a freeboard between 18 and 27 inches, and a draught of hull not over 3 feet, exclusive of skeg and propeller.

## NEW YORK MOTOR-CYCLE HILL CLIMB.

One Minute Flat, Made by F. N. Rogers on an Indian, the Best Time on Fort George Hill—G. H. Curtiss Second and H. Y. Bedell Third.

The second annual open hill climbing contest of the New York Motorcycle Club was held on Decoration Day, on Fort George Hill, New York, and brought out a good list of entries, all of American-made machines except one, a French Griffon of 2-horsepower.

The hill is 2,812 feet long, and is one of the ugliest pieces of road, from a motoring point of view, in the city. Starting at 199th street from Dyckman street, which is practically a continuation of the Speedway, the grade winds southward up Eleventh avenue for about 1,900 feet, the maximum grade being a little more than 11 per cent. The paving is of rough block, which, while having the advantage of not being affected by the weather, made rough riding, and complaints were heard that the tremendous jolting affected carburetor action considerably. The last 800 feet of road is of good macadam with a grade of only 3 per cent., and here some fine speed was made. The only good approach to the hill is from Dyckman street, which makes almost a right angle turn just at the start, and the momentum gained on the level was not of much assistance to the machines and their climbing qualities were thoroughly tried.

### ROGERS MAKES BEST TIME ON INDIAN.

Something of a sensation was caused when F. N. Rogers, a light man on a lightened Indian, made the climb in one minute flat. He made this time on his second trial, his first one, timed at 1:05 1-5, having been interfered with owing to his throttle refusing to open fully. Several extra trials were allowed to those who, through no fault of machine or rider, were unable to make their best showing, and there were some protests on this account, almost every man wanting to make another trial.

The highest powered entries were the 3-horsepower Marsh machines, and the lowest 1 1-2-horsepower Potdevin, which, however, did not materialize at the starting point. This left the Indians with the smallest horsepower but the largest entry numerically. The Rambler was well represented, most of these machines being fitted with Thor motors of 1 3-4-horsepower. The contest resolved itself into practically a three-cornered match between the Indian, Marsh and Rambler machines.

### BOY WONDER DISAPPEARS WITH MACHINE.

There was a second sensation over the ride of H. Fox, a post entry, who rode an Indian. Fox, a boy weighing 88 pounds, went up the hill at a tremendous pace and as he flew up the comparatively level stretch at the top, gaining speed at every revolu-

tion of his wheels, the machine with its light rider seeming to touch only the high spots in the road, it was seen that he would make a good mark. This he did, being timed at 59 4-5 seconds; but after passing the tape the youngster disappeared and was not seen again, omitting the formality of returning to have the number of his machine taken by the judges. It developed that he had ridden the light machine on which Rogers had made such a good record, and Fox was therefore disqualified, leaving Rogers' time of one minute the best of the day. G. H. Curtiss, on a 2 1-2 horsepower Hercules, was second, in 1:02 4-5, and H. Y. Bedell, 1 3-4 horsepower Indian, third, in 1:05 1-5.

### TIMING APPARATUS WORKS WELL.

The electrical timing apparatus which was used is the invention of Alden L. McMurry, of New York, and worked perfectly, the only hitch being in the timing of W. T. Marsh, on a 3-horsepower Marsh machine, who made the climb at great speed, and would undoubtedly have made a good record had not some one unfortunately short-circuited the wires which were laid along the road and sidewalk, causing the apparatus to fail to operate. This was the only failure, and it could not be laid to any fault of the timing machine. Five stop watches were used, all operated by the same electrical device. A big gong announced the start of each rider, and his number was sent up by telephone. The timing apparatus came in for much favorable comment, and not a single protest was registered against it.

### MARSH DISQUALIFIED.

W. T. Marsh, whose time was not taken on his first run owing to the shortcircuiting of the timing apparatus wires, had three trials. On his arrival at the finish after the second trial he informed the referee that he had been stopped by a wagon, and was given a third chance, which he turned to good account, as his time shows. The referee was afterward informed, however, that the wagon incident occurred on the level road at the foot of the hill before the starting line had been crossed, and Marsh was disqualified on Monday night. The disqualification of Marsh and young Fox left Rogers in first place, Curtiss in second, and Bedell third. Following is a summary of the times made on the hill:

Rider.	H. P. Machine.	Time.
F. W. Rogers, New York....	1 1/2 Indian	1:00
G. H. Curtiss, Hammondsport..	2 1/2 Hercules	1:02 4-5
H. Y. Bedell, Hackensack....	1 1/2 Indian	1:05 1-5
G. Andes, New York.....	1 1/2 Indian	1:07 4-5
F. A. Baker, New York.....	1 1/2 Indian	1:10 2-5
G. B. Pieper, Brooklyn.....	1 1/2 Indian	1:11 3-5
G. N. Holden, Springfield....	1 1/2 Indian	1:12
C. Gustafson, Springfield....	1 1/2 Indian	1:14
W. Jones, New York.....	3 Marsh	1:14
H. A. Gilesman, New York....	1 1/2 Rambler	1:15 2-5
J. J. McNevin, New York....	1 1/2 Rambler	1:24
S. Rothchild, New York....	1 1/2 Indian	1:30 1-5
A. J. Bañta, New York....	1 1/2 Rambler	1:30
R. G. Betts, New York.....	1 1/2 Indian	1:31 1-5
D. Bruce-Brown, New York....	1 1/2 Rambler	1:35
M. E. Toepel, New York....	1 1/2 Indian	1:35 3-5
F. W. Horonberger, New York..	3 Marsh	2:10 3-5



## Scored Gas Engine Cylinders.

### Loose Wrist Pins Accountable for 90 per cent. of Troubles— Suggestions for Their Correction.

By A. E. POTTER.

THE successful manufacturer of gas engines is he who pays particular attention to the minutest details of both design and construction. There is probably no small defect that will cause so much damage in a short time as a loose wrist pin. If a canvass could be made of the cases during the past year in which the walls of the cylinder had become scored with resulting loss of compression, necessitating new cylinders, or reboring and fitting new pistons and rings, it is probable that fully 90 per cent. could be charged directly to this cause, and at least 7 per cent. indirectly from failure of proper lubrication, due to pressure leaking by the scores and retarding the flow of oil from the lubricators.

Ask the manufacturer if he ever has had any trouble of this description, and he will answer in the negative. Ask the buyer or

cotters shear off, drive and taper fits are liable to distort thin-walled pistons and expansion and contraction play havoc.

In the class where the wrist pin has bearings in the piston, it frequently happens that the center of the cylinder is not in line

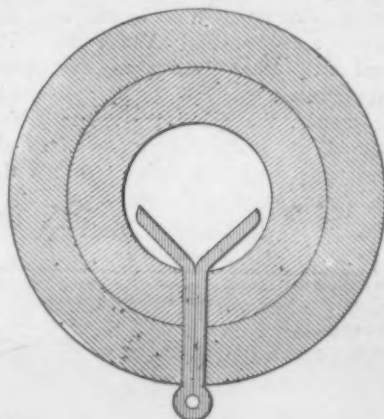


FIG. 2.

with the center of the crankpin so that, when first assembled, one end of the wrist pin is in contact with the cylinder wall. The wrist pin may be held in the upper end of the connecting rod by means of a set screw or taper pin, or else clamped by means of a bolt through the split end of the rod, the bolt being halved into the pin.

Some engines have bronze bushings in the pistons, but cast iron and steel make good frictional contact without the danger of pinching the pin, which may occur where

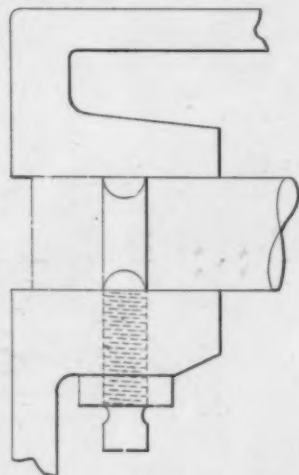


FIG. 1.

speculator in second-hand automobiles what he looks for first in a prospective purchase. His answer will be, "Loss of compression." Ask automobile owners whether or not they have had expensive repairs along this line, or question the managers of jobbing or repair shops at which a specialty is made of reboring cylinders for gas engines, and it will be evident that the evil does exist.

In this connection, all trunk piston gas engines may be divided into two distinct classes, one in which the wrist pin is fixed in the piston with a bearing in the upper end of the connecting rod, and the other in which it is rigidly held in the upper end of the rod with bearings in the piston.

In the class first mentioned, various arrangements have been adopted, such as set screws with and without slotted wrist pins, cotter pins, or drive and taper fits; but none has proven to be entirely satisfactory, as set screws work loose,

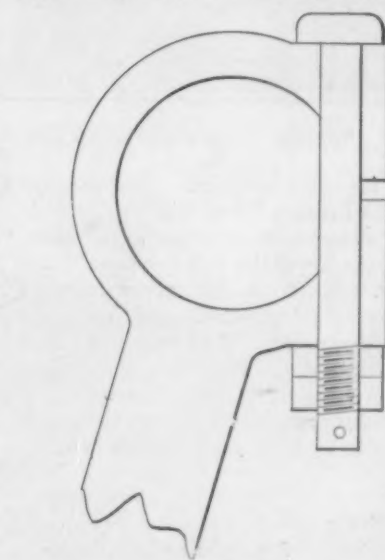


FIG. 3.

bronze bushings are used. In the case of a bolt halved in to the wrist pin, should the wrist pin stick, the result will be a broken connecting rod and wrecked engine.

Fig. 1 shows the ordinary method of securing a wrist pin by means of set screws spotted. Frequently a jam nut holds the set screw in place. Sometimes the wrist pin is spotted and cases have been seen where a groove was cut in the pin. In Fig. 2 is shown a method of securing the wrist pin by means of the cotter pin. Fig. 3 shows the upper end of the connecting rod split at one side and the bolt halved into the pin.

It appears that something radically different is needed to keep the wrist pin ends away from the cylinder walls. For this purpose there is shown in Fig. 4 a construction, which is adaptable in nearly every case except where the bearing is a hardened bushing on a hardened pin, rigid in the piston. It will be noticed that where the upper end of the connecting rod clamps the wrist pin, whether held rigidly or turning therein, the diameter is made slightly smaller, with fillets, so that by slacking up the nuts and jam nuts the pin can be readily removed. This form of construction would cost but a little more than those which are daily being proven unsatis-

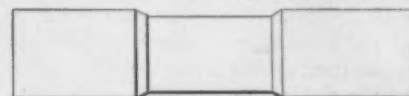


FIG. 4.

factory, and appears to be of sufficient merit to warrant a trial.

With the construction here outlined, it is possible by using a hollow wrist pin, with oil holes to the bearing in the upper end of the connecting rod, to utilize both methods, giving the engine all the benefits of a pin loose in both piston and rod.

Should the lubrication fail in the piston bearings and the pin become stuck, there would still be the bearing in the connecting rod to fall back upon, and *vice versa*.

THE OVERWORKED joke about the servant girl and the oil can may now secure a much-needed rest while the funny men take a fall out of the automobilist who smokes cigarettes while his gasoline tank is being filled, or, to be more accurate, while the tank of his gasoline machine is being filled.—*Atlantic City Press*.

MRS. GARRETT A. HOBART, of Paterson, N. J., widow of ex-Vice-President Hobart, is a recent purchaser of a Knox double cylinder tonneau car.



## Mild Sport at Point Breeze Track.

### Confusion in Entry-Blank Classification of Cars Results in Many Walkovers—Poor Track and Breakdown of Bullet Cause Disappointment.

#### Special Correspondence.

PHILADELPHIA, May 30.—With the intercollegiate championship, two league baseball games and numerous other sporting events as counter-attractions, the first annual race meet held under the auspices of the Philadelphia Automobile Club of Philadelphia at Point Breeze track, cannot be said to have been a success, the crowd in attendance hardly topping the thousand mark.

As a demonstration of automobile speed it doubtless proved interesting to many of the spectators, but as a "race" meet it was lacking in every essential that makes for a contest. There were no contests. One machine was always seconds faster than any of the others, with the result that each event was a walkover. And the spectators were left in the dark as to what was going on until the announcer conveyed the officials' decision through the megaphone.

In the races for "stock cars," some of the contestants appeared at the tape with spidery racing machines, and were allowed to start despite the protests of the others. In fact, protests were more plentiful than strawberries will be next month—every event brought forth a batch. Had the officials exercised the prerogative of "rejecting any entry," as printed in the programme, and ruled the racing machines out of the "stock car" events, the public would have been given a run for its money.

The protests arose from the fact that the club sent out entry blanks classifying the cars by weight only, then on May 23, only five days before the races, sent out circulars announcing a change to classification by horsepower—whether by horsepower only or by power in addition to weight not being stated. Both Nathaniel Huggins, for his Decauville, and Arthur Benjamin, for the Franklin, entered written protests to go before the A. A. A. racing board, which was represented by Chairman A. R. Pardington, and then consented and were allowed to run their cars in certain events.

Added to these handicaps, the track was in wretched condition—lumpy, soft, dusty and sprinkled with glass and nails—and this, with the sharp turns, made the going anything but comfortable to the contestants. Another detriment to the afternoon's sport was the scaring away from the special events of all but one other entry—a 40-horsepower Decauville racer—by Oldfield and his 80-horsepower *Bullet* from the racing car class. Then, to fill the officials' cup of misery to the brim, the great race of the day, the 15-mile special, was a fizzle, owing to the *Bullet* being disabled on the second mile, leaving the Decauville to go it alone for

the \$100 first prize. Immediately after the mishap to the *Bullet*, Nathaniel Huggins notified the committee that he would not object to the race being called off, as he did not want a walkover. This sportsmanlike action was commented on by the local enthusiasts appreciatively. While the withdrawal of the other entrants may have saved the committee a couple of hundred dollars in prize money, the spectators naturally felt aggrieved, and many suggestions as to rule amendments punishing failures to toe the scratch were heard in the stand.

There were two ripples of enthusiasm

feet in the first lap. Then the Decauville picked up, catching Wilkinson in the last turn of the second mile and passed him in the home stretch. Hillyard, driving the Nathaniel Huggins French car, increased his lead to the length of the home stretch at the finish. The time was 6:39 3-5—fast considering track conditions.

Webb Jay made a burst of good speed with his White steamer in his race against R. J. Maynes in Banker Bros.' 24-horsepower Peerless and a 60-horsepower Mors with tonneau attached, entered after the meet opened, by its owner, Mr. Betz, of Philadelphia, who drove it himself. Jay took the lead at the start and made a run-away of the race, developing for the first time during the day the speed of which the car is capable for the first three miles, when he slowed down and came in an easy winner, with the Peerless second by half a mile. In the fourth mile the Mors began picking up the Peerless, but burst the right



VISITORS' CARS GROUPED ON THE LAWN AT THE POINT BREEZE RACES.

during the entire afternoon. One occurred when the Franklin "stock car" manipulator, John Wilkinson, let up a little in the eighth event and allowed the 10-horsepower White steamer, with Webb Jay at the helm, to hold him for a few seconds, and then pulled away without effort. He repeated the trick just before the tape was reached, making a fine-drawn finish, the Franklin winning by about ten yards. The spectators thought it was going to be a contest, and were on their feet in an instant. It was an indication of how real automobile racing would take with the crowd.

The other brief burst of enthusiasm came in the special five-mile race between the Decauville and the Franklin (the same Franklin car that made a mile in 1:10 at Empire City track last year). This was made with standing start and the Franklin got away quickest, gaining a lead of 500

front tire on the turn into the home straight. Jay's time was 6:36 3-5, the fastest five miles of the day except Oldfield's.

Delays were numerous, with nothing but the band to enliven the long intervals. The occupants of the spectators' cars, however, made an impromptu social fête of the occasion and managed to while away the hours from 2 o'clock to nearly 6, by interspersing small talk between races. But even these favored ones had adverse comments to make regarding charges for parking privileges for their cars along the rails.

The "park" of cars was a large one, including the handsome touring cars of many of the local fashionables and city officials, Mayor Weaver and Director of Public Safety Smyth being prominent among the latter.

The fastest time of the afternoon was made in the special race between the 10-



GETTING AWAY AT THE START OF STOCK CAR RACE AT POINT BREEZE

horsepower Franklin "stock car" and Huggins' 40-horsepower Decauville racer, the third mile being covered by the latter in 1:08 3-5.

While the track officials were engaged in discussing protests Oldfield in the *Bullet* and Hillyard in Huggins' Decauville lined up and started in the fifteen-mile race for special cars, without having been given the starting signal. They made one of the best flying starts of the afternoon and made a good race once around the track, when they were signalled to stop. Feeling some irritation, Oldfield jammed his brakes on suddenly, and there was an ominous pounding in the car. He made an examination and some adjustments and then the two drivers were properly started. In the first mile Oldfield gained 200 yards on Hillyard, but entering the turn out of the home stretch there was again a heavy pounding and from the judges' stand pieces of machinery could be seen dropping from the car onto the track. For a second or two it looked as if all the change gears and gear box had gone to pieces. Oldfield ran the car under its momentum to the top of the bank and stopped close to the outer fence. Examination showed that the pins in the propeller shaft coupling had sheared, evidently strained in previous sudden stop at tape.

The disabled *Bullet* was towed to the hospital behind a Winton touring car, leaving the Decauville to gather in the prize unopposed, which it did handily in 19:27.

The third event, a five-mile special race,

had given the crowd some inkling of what the *Bullet* could do under adverse conditions. The Decauville, Barney's only opponent, was out of it from the start, and finished 200 yards behind the Winton, Oldfield winning in 6:15 1-5, the fastest mile being covered in 1:11 3-5.

In the five-mile event for stock cars of any motive power, 16-horsepower or under,



HILLYARD DRIVING NATHANIEL HUGGINS' DECAUVILLE RACER ON ONE OF THE TURNS.

the John Wilkinson lapped the rest of the field—there were five starters—with the exception of the White steamer. When Webb Jay saw the spidery Franklin creeping up behind him he generated a few hundred additional pounds of steam and fought the Franklin off. A last-minute entry, an 8-horsepower Cadillac, operated by "Eddie" Wilkie—and protested, of course—captured third place.

The five-mile handicap, open only to members of the Automobile Club of Philadelphia, was abandoned, owing to lack of entries. As Referee Brazier put it: "It's a case of refrigerated pedal extremities."

The five-mile motorcycle race, despite its thirteen starters, was pulled off without an accident, and was one of the liveliest events of the day. A 4-horsepower Driver, ridden by W. Driver, led for three miles, when Ernhart, on a 1¾-horsepower Indian, wrested the lead from him and maintained it to the finish, beating the Driver by 75 yards, in 8:26, the rest of the field being strung out for three-quarters of a mile.

The 10-horsepower White steamer was the first to get away in the five-mile event for stock cars of any motive power and of 20-horsepower or under. It looked for a while as if a race was on, but at the half the Franklin went to the front and was never headed, although the steamer almost caught up once or twice.

#### THE SUMMARIES.

Five-mile, for stock cars, any motive power, 8-horsepower or under—E. Wilkie (8-horsepower Cadillac), first; J. Mullin (8-

horsepower Ford), second; E. Albus (8-horsepower Elmore), third. Time, 8:30 3-5.

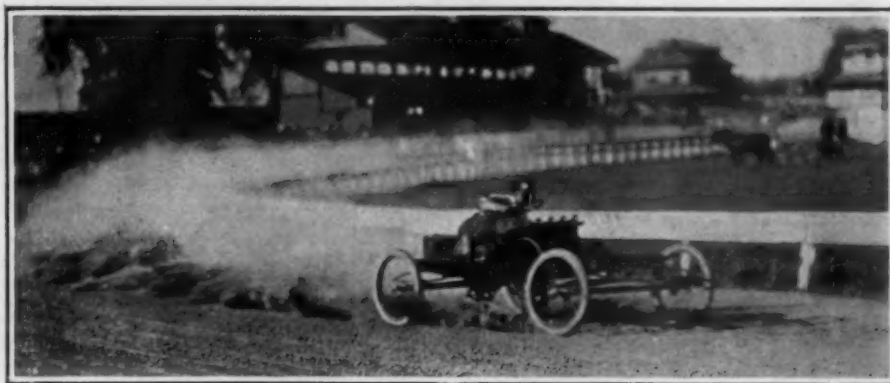
Five-mile for stock cars, any motive power, 12-horsepower or under—John Wilkinson (10-horsepower Franklin), first; Webb Jay (10-horsepower White), second; J. Mullin (8-horsepower Ford) third. Time, 7:09 3-5.

Five-mile special, open to all—Barney Oldfield (80-horsepower *Bullet No. 2*), first; J. W. Hillyard (40-horsepower Decauville), second. Time by miles, 1:17 2-5, 2:33 2-5, 3:50 4-5, 5:03 3-5, 6:15 1-5. Fastest mile, 1:11 3-5.

Five-mile for stock cars of any motive power, 16-horsepower or under—J. Wilkinson (10-horsepower Franklin), first; J. Mullin (10-horsepower Ford), second; E. Wilkie (8-horsepower Cadillac), third. Time, 7:44 3-5.

Five-mile motorcycle, open to all makes—J. Ernhart (1¾-horsepower Indian), first; W. Driver (4-horsepower Driver), second; V. Simmons (1¾-horsepower Indian), third. Time, 8:20.

Fifteen-mile special, for racing cars only—J. W. Hillyard (40-horsepower Decauville),



JOHN WILKINSON IN THE FRANKLIN, LEAVING A TRAIL OF DUST AT A BAD CORNER.



first; Barney Oldfield (80-horsepower *Bullet*), dropped out after first mile on account of broken crankshaft. Time, 19:27.

Five-mile for stock cars of any motive power, 20-horsepower or under—J. Wilkinson (10-horsepower Franklin), first; Webb Jay (10-horsepower White), second; Chas. Coddington (16-horsepower Rambler), third. Winner's time, 6:58; Jay's time, 6:58 1-5.

Five-mile for stock cars, any motive power, 20-horsepower or over—Webb Jay (10-horsepower White), first; R. J. Maynes (24-horsepower Peerless), second. Time, 6:36 3-5.

Special match race, five miles—J. W. Hillyard (40-horsepower Decauville), first; J. Wilkinson (10-horsepower Franklin), second. Time, 6:39.

### Rhode Island Road Work.

The second annual report of the State Board of Public Roads of the State of Rhode Island to the General Assembly at its January session, 1904, is of interest to automobilists of the New England and Middle Atlantic States as showing the beginning of a work under the act of 1902 establishing a State highway system in that little commonwealth.

An appropriation of \$100,000 was made on April 10, 1903, "for the construction, maintenance and improvement of the highways, to be expended under the supervision of the State Board," and the Board reports that during the year 1903 "lay-outs amounting to 18.89 miles were made, the greater part of which were completed. The remaining sections will be completed as soon as the weather conditions are favorable for the continuance of the work." For the year 1904 the Board recommended an appropriation of at least \$125,000. The report is attractively illustrated with thirty half-tone plates, most of them full page, showing pieces of the State roads before and after improvement. The pieces of road improved vary from one-quarter of a mile to nearly two miles in length, and are located in Providence, Newport, Kent, Washington and Bristol counties. The 18.89 miles improved in 1903 were divided into twenty-five separate pieces. The average cost was \$4,962.13 per mile.

There are 249 miles of state highway in Rhode Island, of which 82.89 had been improved up to January, 1904.

Regarding the policy of building "sample" pieces of good road the Board says: "From an economic standpoint it is not a wise plan to build short and disconnected sections of road, for the reason that this method brings scarcely any relief to the troublesome conditions. A short piece of good road between an outlying district and its nearest center is of but little value, since the amount of load remains practically the same, regulated as it is by the depth of the mud, and the excessive grades which precede and follow the newly laid section. It is also difficult to break in upon such a

piece of road after a number of years and extend it. It is the intention of the Board to build a system of roads which shall be a unit of construction, every section being extended from year to year, so that an unbroken stretch of macadam highway will in time result, in accordance with the original plan adopted by the State."

The following table provides some useful and interesting data for comparison of the new road improvement work done under State aid laws in various Eastern States.

Notwithstanding the late start secured last year and the inability to accomplish as much as was desired owing to the considerable amount of preparatory work to be done, the Board takes a very optimistic view of road improvement in Rhode Island, as is shown by the following excerpt from the report:

"The favorable reception accorded to the movement at the outset by the General Assembly, the hearty support given it by the press, the co-operation coming from towns, organizations and individuals, assures us that it was a step in the right direction. Already are the advantages of this new policy proving themselves to be worth the

est attainable efficiency, regardless of cost, but at a reasonable efficiency combined with practicable workability and low cost, is to be seen by comparing radiator practice here and abroad. Without question the most efficient radiator yet contrived is the Mercedes, consisting, as most people know, of short square tubes lying fore and aft and soldered together at their ends with thin water spaces between them, resembling when done a huge honeycomb. This arrangement gives abundant opportunity for air to pass through, with the minimum of actual water. The tubes are very thin, and the whole structure, with several thousand tubes, each a few inches long, is very light.

The Mercedes or "cullular" cooler, as it is often called, has two objections. It is very costly to make, and it is almost impossible to keep it tight. It is necessarily rigid by its own design, but it is held together only by solder. Consequently, joints initially tight become loosened in time by the vibration of the car, making repairs with the soldering iron frequently necessary.

If we compare this with the Whitlock cooler, which has achieved so wide a popularity in the last year, we note that in the

COMPARATIVE TABLE OF ROAD IMPROVEMENT IN THE EASTERN STATES.

State.	Square Miles.	Population.	Miles of Road.	Pop. per Mile of Road.	Total Valuation.	Valuation per Mile of Road.	Miles of New Road.	Cost of Work.
Rhode Island...	1,250	428,556	2,000	214	\$ 359,549,461	\$179,774	19	\$ 93,711
Massachusetts...	8,315	2,805,346	20,531	136	3,154,746,086	153,657	480	5,150,923
Connecticut....	4,845	908,420	15,000	61	649,571,791	43,304	454	2,233,000
Vermont.....	9,565	343,641	14,892	23	171,283,543	11,501	*	—
New York.....	49,170	7,268,894	74,097	98	5,847,992,233	78,923	484	4,135,000
New Jersey....	7,815	1,883,609	20,000	94	953,610,580	47,680	959	4,545,494
Pennsylvania....	45,215	6,302,115	80,000	79	3,027,649,290	37,845	*	—

\* Vermont and Pennsylvania, like Rhode Island, are just starting the work of road improvement under new State Aid laws and data of work done is not available.

cost and labor, particularly in the remote sections of the State, where the roads have hitherto been of the worst character. The users of these roads are already convinced that everything said in their behalf, from an economic standpoint, was just and true; the roads themselves have proven the best missionaries in favor of the work.

\* \* \* The demand for good roads is heard on every side. \* \* \* We believe good roads, well built and properly supervised after construction, will open up many out-of-the-way towns, out of the way simply because difficult of access by reason of dusty, muddy, gullied, or rocky roads. They will give the natural advantages of our State opportunity for development; they will relieve the crowding of our cities, will encourage suburban building; they will unite the smaller towns in groups, and connect all parts of the State for a better commercial opportunity and welfare."

### Modified Honeycomb Radiator.

A good example of the American manufacturer's disposition to aim, not at the high-

latter the water is cooled by passing in thin sheets between sheets of corrugated copper soldered together in pairs at front and back, each pair entering a header or manifold at top and bottom, but being quite unconnected with the adjacent pairs on each side. The general appearance of this construction suggests the cellular type, but it is very much cheaper to make, and, more than that, it is not essentially rigid. Each pair of sheets is free to yield without excessive strain at any point, and, therefore, with a good job of soldering, leaks ought not to occur.

An incidental advantage of the Whitlock cooler over any form of tube or rigid cellular cooler is its comparative immunity from damage by freezing, the copper sheets being free to spring enough to take care of the expansion. A case is reported of a radiator which was frozen solid three times last winter, without apparent damage to itself.

Add to these features the saving in weight made possible when a really efficient cooler takes the place of an inadequate cooler plus a tank, and the saving in piping when radiator and tank are combined in one, and the popularity of this type of cooler is easily understood.



## Porto Rico Passenger Service.

Passenger and baggage service by automobile has now been started between Camuy and Aguadilla, Porto Rico, by C. H. Martin, who arrived at Camuy several days ago with the three Knox cars which he had especially built and fitted with Cape Cart hoods in Springfield for the service. Trains leaving San Juan at 6:30 A.M. are met at Camuy by one of the automobiles seating seven or eight passengers, which leaves at 10 A.M. and connects with the train at the railroad terminus in Aguadilla at 1 P.M. The second train arrives in Ponce at 6:13 P.M. The gap between the two railroad terminals is about twenty-six miles. The automobiles make two round trips per day, one of the three being held always in reserve in case of accident to the machinery necessitating the withdrawal of one of those in service.

The seats of the cars are arranged like those of a wagonette, with a rear entrance, and the folding front which is ordinarily used as an auxiliary seat is in these machines arranged for the carriage of luggage, as shown in the accompanying illustration.

## A Limousine De Luxe.

The handsome silver-trimmed limousine car that was a leading feature of the Locomobile Company's exhibit at the Madison Square Garden show last January, is now seen on the boulevards of New York City on pleasant Sundays, having been bought and put into private service



LOCOMOBILE LIMOUSINE DE LUXE OWNED BY COMMODORE F. G. BOURNE N. Y. Y. C.

by Frederick G. Bourne, commodore of the New York Yacht Club.

This car, shown in the illustration herewith, has a most graceful enclosed body of aluminum mounted on the chassis of a Locomobile four-cylinder 16-22-horse-

power car. The body is painted a deep, rich, wine color, striped with a white hair-line, and all of the metal work, such as operating levers, steering column and wheel, rails, pedals, door and handles, and the fittings, such as lamps, horn, lubrica-

tor and commutator, are silver-plated and highly polished.

Needless to state, the car attracts attention and admiration wherever seen.

THE UNITED STATES Consular Reports state that the Bavarian Trade Museum has adopted the plan of sending out lecturers to show the practical workings of mechanical toys to the public. The toys lectured upon include steam, air and gas engines, railroad trains and, of course, automobiles.

ARTICLES of incorporation were filed last week in the office of the Secretary of State

of Michigan for the Yellowstone Park Automobile Co. Several Grand Rapids men are interested in it and the company is organized for the purpose of transporting passengers through Yellowstone Park in automobiles, it is said.

## Rubber Tree Cultivation.

It is a curious fact that the *Ficus elastica*, the only rubber tree which is commercially successful in India, in its wild state germinates in a forked tree some 30



KNOX AIR-COOLED CARS FOR PORTO RICO PASSENGER SERVICE.

or 40 feet above the ground, sending out numerous roots toward the earth. For from six to ten years these trees grow with their roots in the air. Upon reaching the ground, however, the whip-like roots rapidly increase in size, occasionally reaching a circumference of six feet. The tree upon which the rubber tree begins life is not infrequently killed by the vigorous growth of the intruder. After the *Ficus elastica* has attained a considerable size it frequently commences throwing out slender roots from points 60 or 80 feet above the ground. These reach the soil, in time, and at once grow rapidly, attaining almost as great size as the original roots. The rubber tree requires a great deal of moisture, and in India thrives best in the lowlands. Frost is usually fatal to its development. The damp regions of the Sikkim Himalaya and eastward to Assam and Burma are the parts of India where this tree is most abundant. It is usually cultivated, being widely scattered in its native state.

Rubber is the most valuable of the minor forest products of Assam, where, in 1873, a rubber plantation was established which has been steadily developed and improved. The rubber trade is open to any one who secures the necessary license and pays the duty of 20 cents per 3½ pounds of rubber. The planters are paying increasing attention to the cultivation of the rubber tree in India, and the British Government is making experiments at the government farm at Buriyer to determine the best trees and their proper care.

Attempts were made to grow the Para rubber tree in Assam, India, but met with failure, as this tree requires extreme humidity and rainfalls at long intervals. Certain parts of the coast district are more suited to its growth, however, and it is being experimented with there to some extent.

The wholesale destruction of rubber trees in their wild state by rubber gatherers has forced scientific cultivation.

## On the Road to St. Louis.—II.

### Along Good and Bad Roads Through Mountainous Districts from Delhi to Rochester in New York State.

#### *Special Correspondence.*

ROCHESTER, May 29.—Delhi, the county seat of Delaware County, selected for the second night's stop for the New York section in the St. Louis run, is one of the prettiest of the Catskill Mountains towns. There are three hotels, any of which is well adapted to take care of tourists. They are the Kingston, Edgerton and American House, all commodious and well provisioned. While there are no automobile repair shops, there are several wagon factories and blacksmith shops, at any of which minor repairs to either engine or running gear can be made.

Our first Sunday on the road was spent at Delhi. All the inhabitants anxiously inquired about the big run, and the manager of the Opera House said that if he was sure the tourists would come in full force on July 27 he would secure a special attraction for his theatre as the rural inhabitants for twenty miles around will flock to Delhi on that night, an automobile parade of the magnitude of the proposed St. Louis run being to these country folk of even more importance than a circus parade.

#### MISLEADING ARROW A PUBLIC SOUVENIR.

The white arrow put up for the endurance run last October is still in place on a tree marking the turn off Main street and no one in Delhi would think of removing it, although the men in the pilot car who placed the arrows through this county made a mistake of three blocks in tacking up this particular arrow, all of which has to be retraced to get on to the mountain road through Franklin to Unadilla, the place selected for luncheon the third day out.

While Unadilla is the official stopping place for Thursday noon, many of the tourists will probably push on to Bainbridge, where there are several good hotels, the proprietors of which are eagerly awaiting the big run and whose stories to-day are largely of the hardships encountered by the participants in the New York-Pittsburg run.

#### ROAD MOUNTAINOUS BUT BEAUTIFUL.

The road from Delhi to Binghamton is mountainous, but as a rule is very good, and the seventy-one miles separating the two night stops can easily be covered by the small cars in six or seven hours in good weather, while the larger machines should do it in two-thirds that time. While ascending one of these mountain hills we stopped to take some photographs of the beautiful valley below (see engraving), and a bright country lad of fifteen joined us.

"I know what you fellows want," said he, "You want a tow up the hill, don't you? Now, I'll be right around with my horse and for a dollar will haul you to the top.

I hauled lots of fellows last October and bigger machines than yours." He was much disappointed when informed that the stop had been made to simply secure some views.

At Birmingham we ran into the new garage of Roy C. Whipple, the place selected for storing the machines on the night of July 28. Mr. Whipple met us at the door and conducted us through his mammoth emporium, containing space enough in the basement and first and second stories to store several hundred cars. Above the garage is the headquarters of the Binghamton Automobile Club. The clubroom furnishings are luxurious, and Mr. Whipple, who is himself one of the leading spirits of the club, assured us that everything would be done to make the tourists carry away from Binghamton pleasant memories of their stay in the "Parlor City."

#### NEW ROUTE FROM BIRMINGHAM TO OWEGO.

A few minor changes in the route from Binghamton to Owego have been made and instead of running up the river road through Union as was done last fall, a much better route will be found by turning to the left after passing the Country Club's golf grounds and following the railroad to Endicott. At Bridge street, Endicott, turn left and cross the Susquehanna to Vestal and continue on to Owego over excellent roads. Ten miles from Owego the Susquehanna is crossed on a toll bridge, for which a charge of 25 cents is made. Only 20 cents is charged for heavy teams with loads of

stone, while light teams are obliged to pay but 15 cents.

#### DELIGHTFUL RUN TO ELMIRA.

The run from the Susquehanna to Elmira is a delightful one and can be made at a good rate of speed. The land on either side of the highway is planted with tobacco, which is the principal crop of that section. At Chemung, about eleven miles from Elmira, gasoline or repairs can be secured at the blacksmith shop of A. F. Lowell. The "smithy" will soon be an automobilist himself, as an 8-horsepower gasoline car he started to construct during his spare time about three years ago is nearing completion and will be on the road in a few weeks.

Elmira, selected for luncheon on the fourth day of the St. Louis tour, can boast of two good hotels and a number of grill rooms and restaurants of ample size to care for the tourists. The roads from Elmira to Bath are generally good.

#### BAD STRETCH OF CLAY ROAD.

Sixteen miles of clay roads between Dansville and Mt. Morris were the worst we have encountered since leaving New York. Narrow tires are allowed on wagons in Livingston County and heavy loads of pressed hay are carted over this stretch, cutting ruts in the roadway some of which measure fourteen inches deep. While stopping to take a picture of this bit of road we were hailed by two farmers owning adjoining farms.

"What's the matter? Broke down on our turnpike?" inquired one of the rustics. Advised to the contrary, the farmer seemed rather disappointed and, upon being questioned, said that it was his sincere wish that some owner of a costly automobile would run into one of the ruts and break his machine all to pieces. "O, no, I haven't anything against the automobilists, but I



A STOP NEAR DELHI OVERLOOKING A VALLEY IN THE CATSKILL MOUNTAINS.





DEEP RUTS IN CLAY ROAD BETWEEN DANSVILLE AND MOUNT MORRIS, NEW YORK.

know if some wealthy tourist should strike this piece of roadway, break his machine and sue the township, he would be awarded heavy damages and that is the only thing that will induce the township to work on this piece of roadway."

Leaving the route of the endurance run at Avon, we struck out for Rochester to spend Sunday. The roads in Genesee County are fair, but when we reached Monroe County and coasted in from Scottsville to Rochester over one of the finest pieces of State roads that have ever been constructed, and realized that Monroe County could boast of more than 100 miles of such highway, either built or in the course of construction, we felt thankful for having such a man as Senator "Billy" Armstrong, of Higbee-Armstrong good roads fame, representing our interests at Albany.

(To be Continued.)

## German Petroleum Output.

Germany is a large consumer of petroleum products, and the fact that by far the greater part of her supply of this staple is imported from the United States seems to have had the effect of inciting some of the German newspapers to prophesy the approach of Germany's independence of the United States as a source of petroleum supply. This they have been doing for many years, however, and their predictions seem as far from being fulfilled as they ever were. The figures given herewith from the United States *Consular Reports* show this quite conclusively.

In 1903 the petroleum and naphtha products imported into Germany from the United States amounted to 1,868,400,000 gallons, against 486,000,000 gallons from Russia, and 396,000,000 gallons from all other countries. It will be seen that the import from the United States exceeded by 986,000,000 gallons the total import from all other coun-

tries in the world, Russia included. The imports from other countries than the United States are increasing, but at such a slow rate that it would seem hopeless to anticipate German independence of American supply.

The figures above quoted refer to petroleum products of all kinds, including lubricating oils, in the production of which Russia has a long lead over all other sources of supply. The pre-eminence of the United States is mainly in the supply of refined kerosene, 1,077,600,000 gallons of this product having been exported to Germany in 1903, while the Russian supply amounted to but 313,800,000 gallons. In the supply of lubricating oils Russia is in the lead, having sent Germany 162,000,000 gallons, against 126,000,000 gallons from the United States.

The German oil district is about Wietze, in northwestern Germany, where out of sixty wells, 25 from 450 to 1,400 feet deep, are producing from 15 to 16 carloads per day of crude petroleum, of which only that brought from a depth of 1,000 feet or over can be used for anything but railway car lubrication and similar purposes. The material from below the 1,000 foot mark is of a much lighter quality. Until recently only small concerns with limited means have worked these fields, but operations on a large scale are being set on foot by the International Boring Company, Erkellenz, near Aix-la-Chapelle. The German product can never amount to even a considerable proportion of the demand, however, and it is anticipated that, for a very long time at least, the United States will continue to be Germany's chief source of supply of the lighter petroleum products.

## Olds Light Tonneau.

The new Oldsmobile tonneau is attractive, and in operation it has been found to possess plenty of speed and ample power for hill-climbing. The single-cylinder motor,

which was at first rated at 8-horsepower, is said to develop considerably more, and is now rated at 10-horsepower. There are no gaskets in the engine—a feature that will be appreciated by those who have had to make a gasket joint when on the road—the cylinder and head being cast integral. The cylinder head of the tonneau motor is at the forward end under the foot-board, the reverse of the position in which the runabout motor is placed, the motor being run in the opposite direction, with the crank descending on the power stroke instead of ascending, as is usually the case with a single cylinder motor. It is thought that the wear caused by the weight of the piston is eliminated to a great extent by this arrangement. The cylinder can be removed, if necessary, without disturbing the remainder of the motor, and the crank shaft, with fly-wheel and transmission gears attached, can be taken out without difficulty. The transmission gives two speeds forward and a reverse, the drive being direct on the high gear.

It is impossible to turn the engine over by hand with the spark advanced. The shaft on which the crank must be placed is located in a recess, which is normally covered by a brass plate. To insert the crank it is necessary to move the plate aside until a hole in it registers with the hole for the crank. The moving of the plate automatically retards the spark by means of a lever connection. When the crank is removed a spring immediately causes the plate to cover the crank hole, but a ratchet arrangement prevents the advancing of the spark, which is left in late position, to be advanced by hand when necessary.

The familiar side-spring is applied to the Oldsmobile tonneau car, and with the 83-inch wheel base and 3½ inch tires used, makes the vehicle a very comfortable one to ride in. The bonnet covers the gasoline and water tank and batteries. The radiator is in front and the Splittdorf coil on the dashboard. The brakes are heavy and substantial in design, two acting on the rear hubs and one on the differential.

The steering wheel and column may be tilted and locked in whatever position best suits the driver. On the top of the steering wheel are located the throttle and spark levers. The change speed lever is at the right hand side of the driver's seat, as in the runabout, while the reverse and brakes are operated by pedals.

It is reported by the builders of the Oldsmobile that the power of the motor placed in the Oldsmobile touring runabout, which was designed to develop 6-horsepower, has so far exceeded this that it is now rated at 7-horsepower, which still leaves an ample margin.

THAT the freight lines are too slow for the delivery of automobiles is shown by the fact that the American makers and importers are now delivering cars over the road throughout New York and New England from the various New York garages.

## Hints on Managing a Gasoline Runabout.

### Getting Rid of Old Oil Deposits in the Mechanism.—Inspection of Cooling and Wiring Systems and Body Fastenings.

**A**FTER an automobile has been run for some time the lubricating oil in the crevices and corners thickens, gathers dirt and deposit and to some extent interferes with the perfect working of the machine. In the case of the piston, the oil works into the grooves and behind the rings, where it gums up and clogs the rings, preventing their easy motion. In the connecting rod and other bearings it tends to prevent the flow of lubricant to the surfaces intended to be lubricated, and may, in extreme cases, cause heating on this account. Outside bearings, not protected by casings, rapidly collect dust, which is, of course, far from desirable, and should be avoided as much as possible by the use of oil hole covers, where practicable, and by keeping the bearing itself well supplied with clean oil and the outer parts free from it. The valve stems may get gummy and cause the valves to move without customary snap. Now, all this can readily be avoided by occasionally giving the entire mechanism a liberal dose of kerosene, which is excellent for washing out old oil and dirt. If the machine has not run for too long a time without a thorough cleaning, kerosene will remove every particle of foreign substance, leaving the surface clean and bright.

#### CLEANING OUT THE MOTOR.

Start in your cleaning with the motor. Remove the spark plug and, as far as practicable, the wiring, for the mixture of oil, carbon and particles of metal will not do any good if it soaks into the insulation. If your crank case is oiltight, and is designed to hold lubricating oil, drain out all the oil and put in a liberal quantity of kerosene—enough to fill more space than the lubricating oil would occupy. Squirt kerosene liberally into every oil hole, and get lots of it into the cylinder. Put a cork or plug of some kind into the spark plug hole, open your compression, taking care that the dirty spray cannot get where it is not wanted, and then get hold of the crank and give the motor a vigorous churning for a few minutes. Then let it stand for an hour or so—or over night, if you like—and drain off the dirt-laden kerosene from the crank case. Put in another charge of clean kerosene, and churn it up again. When this is run off your engine will be beautifully clean, and everything working freely.

#### TRANSMISSION AND DIFFERENTIAL.

The transmission and compensating or differential gears should come in for the same treatment, only the method of application will obviously be different. This is a good time to attend to the cleaning of the chain, as described in a former article. While cleaning the differential, notice whether the screws that hold the pinions in place are tight and so secured that they

cannot come out. Occasionally this occurs and the first thing that happens is that the head of the screw comes in contact with the casing of the gear, or the arms, if it is of the open type. The result is usually expensive, as may be imagined.

After everything has been thoroughly soaked with kerosene and worked clean, let the machine stand for a while to allow the kerosene to run out as much as it will, and then, after wiping everything clean, proceed to oil up in the usual manner. Probably the first oiling will show a tendency to run out owing to the thinning action of the residue of the kerosene. It is, therefore, a good thing to turn everything over by hand to work out as much of the thin stuff as possible, before adding the fresh lubricant.

#### SCRAPING SOMETIMES NECESSARY.

In case the car has been running for a long time without the engine having been cleaned, and especially if it has been given too much oil or gasoline frequently, the cleaning may not be quite so easily accomplished, as the deposit may require scraping off. This entails the removal of the cylinder head, an operation that usually necessitates the renewal of the gasket. If, however, you have had a car long enough to get it in such a condition you will probably know what to do with it.

#### REMEMBER THE GASOLINE SYSTEM.

In the general cleaning up do not forget the gasoline system. The carburetor and gasoline tank should be thoroughly washed with gasoline, and all sediment cleared out. If there is a sediment trap in your carburetor, it should be cleaned out, or examined to see if it needs cleaning, quite frequently. All tubing should be blown through. Sometimes a blast of air from a tire pump will dislodge an obstruction which is difficult to reach. And be most particular not to leave a particle of thread or waste or any foreign substance in the gasoline system, for, though it may not cause any trouble for some time, it is sure to do so later on, and it seems to be the case that such things always happen at the most inopportune moments.

It is very poor economy to use the same oil for a long time in the crank case, as it loses its lubricating qualities and becomes charged with dirt and foreign substances. It should be frequently changed, or at least freshened by the addition of new oil; the former method, however, is much the best, as the presence of the old mixture can but lessen the effectiveness of the lubrication.

#### EXAMINE THE COOLING SYSTEM.

The water system is not likely to give trouble if it is watched, but a careful examination should be accorded it along with the rest of the machine. See that the radia-

tor is securely held in place so that it cannot be strained to the leaking point, and that the piping is similarly fastened. The pump should work freely, and—this is important—the means for driving it, whatever they may be, should be in perfect condition at all times. If your pump stops working it will not take long for the water to boil away, and trouble immediately begins to develop. When filling up the water system assure yourself that there is no air in it. There should be a vent at the highest point in the system through which air may escape. Open this, and keep it open while filling until water comes through. Then you are sure there is nothing but water in the radiator or pipes, if there are no "pockets" where air can collect, and there should be nothing of the sort.

#### LOOK OVER THE WIRING SYSTEM.

As a very large proportion of the road troubles of automobiles arise from the electrical system, it would be a good thing to go over the wiring at this time and make sure that it is in perfect condition. For a beginner, it is an education in automobile mechanics to re-wire the entire machine. This is not difficult to do if you take each piece of wire separately. Do not attempt to remove all the wiring at once, for the first time, but take one piece at a time and, noting carefully where it runs and what it is for, remove it and put in a fresh length. Cheap covered wire, such as the cable used for electric bells or lamps, is not economical for this class of work. The special cable made for automobile wiring is more expensive, but pays in the long run. Don't use staples driven into the woodwork of the body. Every staple is a possible source of leakage, as it may, by the constant vibration, chafe through, or part way through, and just a little wet will cause a considerable leak. Use cleats of wood, or, if possible, grooved strips which will entirely cover the wires. At points where there is a twisting or bending movement in the wiring, much trouble may be avoided by using a connection formed by a doubled brass chain of small size run through a piece of rubber tubing. Be careful, in making such joints, that the tubing is so secured that it cannot slip along and leave the chain bare. Any part of the wiring that shows a tendency to break should be replaced by some flexible connection, such as the one described. It is a source of considerable satisfaction to know that your wiring is so installed that it is one of the least likely sources of trouble.

If your car is a new one, and even if it is not, for that matter, it is advisable to go over the body occasionally and take up the slack in all the screws and other fastenings. The constant and severe vibration and the natural expansion and shrinkage of the wood will be found to have a tendency to loosen the fastenings, and cause unpleasant noises which, though small, get to be annoying and sometimes are very difficult to locate. Lamp brackets are very prone to jar loose, so keep an eye on them.



## Royalty on a 150-Mile Auto Trip.

### Prince Pu Lun and Party Ride from Indianapolis to Lafayette and Return as Guests of A. C. of Indiana.

*Special Correspondence.*

INDIANAPOLIS, May 28.—To the Automobile Club of Indiana belongs the honor of being the first automobile club in America to have as its guest a prince of royal blood and to have on its membership roster as an honorary member an heir apparent to a throne. Under the auspices of the Automobile Club of Indiana, Prince Pu Lun, the favorite nephew of the Chinese Emperor, took part in an automobile run from Indianapolis to Lafayette, Ind., and return, last Tuesday and Wednesday, a distance of more than 150 miles.

The Prince was attended in the run by

Pu Lun, the apron under his Thomas car caught fire, but by emptying some milk cans from a passing milk wagon and filling them with water from a nearby fountain the blaze was extinguished and the only damage done was to slightly burn the hand of Russell Fortune, who drove the machine. The Prince knew nothing whatever of the accident.

Another delay was occasioned by the overturning and partial wrecking of the car that was to act as a pilot. A new driver took the car from the garage to give it a trial and in dodging a trolley car he dashed

dropped out. One car had a broken axle and another two punctured tires.

#### DEMOCRACY FORCED UPON THE PRINCE.

At Frankfort the Prince had an opportunity to observe Americans as they really are. He was jostled with a hungry horde in a hotel washroom, mingled with a crowd in the dining room and saw country folk waving their welcomes from fence tops and door-yard gates. He got real American dust in his eyes and rubbed them in school-boy fashion, and at night appeared in court costume at a reception and showed that he could be democratic in a democratic country. The Prince saw Americans turn back to help Americans and remarked the fact with commendation.

In the washroom of the Coulter House at Frankfort, where the party ate luncheon, a colored porter asked one of the party if the Prince would shake hands with a colored man, and being answered in the af-



CROWD ASSEMBLED IN INDIANAPOLIS TO SEE PARTY OF CHINESE AND AUTOMOBILE CLUB MEMBERS START FOR LAFAYETTE.

Wong Kai Kah, Chinese Commissioner to the World's Fair, and his four secretaries, who are making a tour of the country with him. Another out-of-town participant was Augustus Post, of New York City, who arrived here from St. Louis over the southern route of the automobile run from New England to the World's Fair city two days before the run and at the solicitation of Gordon E. Varney, secretary of the automobile club, stayed over for the run. Mr. Post had as guest in his steam touring car Mayor Holtzman, of Indianapolis. After the trip to Lafayette he expressed himself as being glad that he stayed.

#### MISFORTUNES BEFORE THE START.

Just before William Fortune, president of the club, in whose car the Prince was to make the trip, started to the hotel to get

the machine against a house and put it out of commission. Owing to the short time before the run was to start it was impossible to rig out a new car and one that had been selected as a repair car was substituted and took the place at the head of the procession. The pilot car was occupied by Carl Fisher, Gordon E. Varney and THE AUTOMOBILE representative.

Promptly at 10:30 Tuesday morning the machines moved from the Columbia Club, the pilot car leading by about half a mile. Augustus Post's car ran as a second pilot all the way out of Indianapolis. At every turn in the road and at every crossroad confetti was scattered in order that the party following might not lose the way. Twenty-one cars started from Indianapolis, but when Frankfort was reached three had

firmative, he offered his hand to the Prince, who smiled and shook hands with him.

#### GUESTS ELECTED HONORARY MEMBERS.

A crowd of half a thousand persons gathered at the hotel called for a speech by Pu Lun and would not be put off, so the Prince thanked them through Mr. Wong for turning out to greet him. During luncheon at Frankfort, on motion of Mr. Varney, the Prince, his secretaries, Mr. Wong and Augustus Post were elected to honorary membership to the Automobile Club of Indiana. Pu Lun, Mr. Wong and Mr. Post all made speeches thanking the club for their courtesies.

A party of motorists from Lafayette met the Indianapolis party at Frankfort and escorted it into Lafayette. The pilot car had previously been sent back to answer

a call for help, and Mr. Varney was given a seat in the car of Harry Kramer, of Lafayette, while THE AUTOMOBILE representative was given an invitation to go into Mr. Post's car.

The streets over which the party entered Lafayette were crowded and factory whistles and cheers greeted the participants all along the route. Before going to the hotel the party was driven straight through the city to Purdue University. The moment the Prince entered the grounds a salute of twenty-one guns was given him. Together with the members of his party and Mayor Holtzman, the Prince reviewed the cadets and showed a good knowledge of military tactics during the inspection.

In the evening, despite his long trip, the Prince stood in line and was introduced to and shook hands with at least 3,000 persons at a public reception held at the home of the Lafayette Club. He appeared in his court dress, which was the envy of all the women present. The members of the Indianapolis Club were entertained handsomely by the Lafayette contingent that had charge of the entertainment.

At 9 o'clock Wednesday morning, carriages conveyed Pu Lun and his party, together with several members of the club, to the university, where the Prince made a thorough inspection of all of the departments. He was especially interested in a huge locomotive used by students who are studying locomotive building and he took especial delight in operating levers and wheels and seeing the machine run at a high rate of speed, even though it did not move from its fastenings. The party left the university at 11:45 and drove back to the hotel, at which place, at 1:30 o'clock, the automobile club again took charge of the Prince and started back to Indianapolis by way of Crawfordsville, Ind.

#### BRIEF STOP IN CRAWFORDSVILLE.

The reception committee from Lafayette acted as pilot for several miles out of that city. About two miles out of Crawfordsville a reception committee from that city met the party and conducted it through the city and for a short tour of the grounds of Wabash College. A large crowd had gathered at the courthouse and the Prince was obliged to speak a few words to the people, after which a trip was taken past General Lew Wallace's home and the ride to Indianapolis was resumed.

About ten miles out of Indianapolis one of the tires of the machine in which the Prince's secretaries were riding, came off. The secretaries were transferred to another car and reached the city at the same time as the Prince did. A happy feature of the trip was that no trouble came to Mr. Fortune's car and the Prince did not suffer any inconvenience during the entire trip.

The out trip from Indianapolis to Lafayette, a distance of 78 miles, was made in less than five hours' running time, and the return from Lafayette to Indianapolis, a distance of 76 miles, in four and one-half hours. Speed was not attempted.

## French 1904 Gordon Bennett Cars.

### Few Details of Construction of the 1904 Machines Have Been Made Public.—Radical Departure in Panhard Construction.

UNLESS photographs of racing cars, with bonnets on and drivers seated, deserve to be ranked as information, next to no information at all has been made public about any of the French candidates, successful or otherwise, for places on the International Cup team. This, of course, does not include the big Gobron-Brillé cars of 120-horsepower which have been referred to several times in these pages.

Regarding the successful cars,—Richard Brazier, Mors, and Turcat-Méry,—almost nothing is known beyond their approximate weight and the bare character of the transmission. A few facts, however, are known about the Panhards. These latter machines, one of which is shown in our illustration, have motors said to give 100-horsepower at 800 r. p. m., with individual steel cylinders of equal bore and stroke, copper water jackets, and separate cast heads on the well-known "Centaure" pattern used by Panhard for the last two years. The flywheel has six fan-blade spokes, and a hub clutch much on the principle of the Weston, described in THE AUTOMOBILE of Sept. 5, 1903. Numerous loose flat rings of—apparently—sheet steel have lobes or teeth alternately outside and inside. The outer lobes, a dozen or so on each ring, are slipped into grooves in a shell enclosing the rings and fast to the flywheel. The inner lobes enter similar grooves in the clutch shaft; and the pressure of a spring, forcing all the rings together, produces engagement. Apparently this arrangement dispenses with the need of a loose coupling between the clutch and the first gear shaft. The rings, of course, work in oil.

The especial feature of the racing Pan-

hards is that they discard the side chain drive, with which all Panhards heretofore have been identified, for the propeller shaft and live rear axle. The reason for this is stated by the makers to be that the speed of the cross countershaft, if one were used, would be as great as that of the wheels, so that no weight would be saved by its use. The gear box gives three forward speeds and a reverse, and the high speed drive is direct, the jack shaft below being disconnected for this speed. Two radius rods attach, one to the top and the other to the bottom of the axle gear case, and both are pivoted at a common point on a cross frame member. The gasoline tank is at the extreme rear, and the gasoline is fed by exhaust pressure to the carbureter, which is close to the cylinders. As will be seen, the radiator is formed like a cowcatcher, with the sloping tubes manifolding into a header above and a large tube below. Ignition is by Eiseman magneto with a battery for starting.

Of the successful Mors car little is known except that the axes of the cylinders, instead of intersecting the axes of the crankshaft, are a little ahead of the latter in the direction of rotation, thus giving, it is claimed, a better "purchase" for the piston, or more direct action, on the power stroke. The gain by this arrangement—which has already found a limited acceptance in stationary engines—is probably due chiefly to the reduced side thrust of the piston, owing to the connecting rod's angularity, when the greatest pressure is exerted. The Mors engines, like the Panhard, are said to give about 100-horsepower and their cylinders

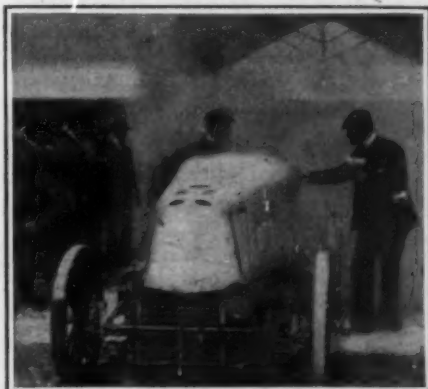


HENRY FARMAN AT THE WHEEL OF 100 HP. GORDON BENNETT PANHARD.



are cut out of solid blocks of steel, the heads being integral.

Of the Turcat-Méry no particulars have been given out, save that, like the De Dietrich, which it nearly resembles, it uses the



MORS 1904 GORDON BENNETT CAR.

standard Panhard type of transmission with side chains. In this class are also the Mors, Hotchkiss, Richard-Brazier, and Gobron-Brillié cup candidates, and the largest of the three sizes of Clément-Bayard cars built for the same event. The Darracqs, Panhards, and two smaller sizes of Clément-Bayards use shaft drive; and the Serpollet G. B. cars have live axles and single-chain drive, following the usual custom of their makers.

The Darracqs are substantially identical in pattern with the English Darracqs already described in these pages, and the Opel Darracq entered by Germany will be the same.

The large Clément-Bayard cars above referred to are of 120 horsepower. They have mechanically-operated inlet valves, with variable lift, the inlet and exhaust valves being opposite. These cars were not finished in time for the elimination race, in which the Clément-Bayard contestants were chosen from two types of shaft-driven cars, one of about 90-horsepower, said to have 155 mm. bore by 160 mm. stroke, and the other of lower power and weight.

The Richard-Brazier and Clément-Bayard cars are the lightest among the French candidates, though none of them weighs under 800 kilogs. In nearly all the machines the gear shafts run in ball bearings. The Hotchkiss cars, in whose manufacture Henry Fournier is interested, have cylinders 180 mm. in bore by 175 mm. stroke (7.1 by 6.9 inches), and are said to develop 108-horsepower at 900 r. p. m. and 115-horsepower at 1,200 r. p. m. Like all of the French cars except the Serpollet they have four cylinders.

The Serpollet cars have six-cylinder engines rated at 50-horsepower, but said to be capable of developing 150-horsepower, though this is probably exaggerated.

### British Elimination Muddle.

The report that S. F. Edge has refused to compete on the British team in the international cup race is denied by *The Auto-*

*car* on the authority of an interview with Mr. Edge himself, whose protest to the committee on the subject of Earp's exclusion from the team has been made public. The protest is worded strongly, but does not even hint at the silly threat with which Mr. Edge was credited or discredited. So far, therefore, as present developments go, Mr. Edge is still a member of the team; and this should be satisfactory, since he is with hardly a doubt the best driver in England to-day, and his car was much the fastest of those in the elimination trials.

In the same interview Mr. Edge expresses his opinion that it would be useless to enter any car in the cup race this year that could not beat eighty miles an hour over a level mile, as, whatever its other qualifications, the French cars would simply run away from it. For this reason Mr. Edge pronounces the Isle of Man trials seriously deficient, as a car winning on that course would be unsuitable for the Homburg course, and the selection of British cars was made with very little reference to the maximum speed as shown in the speed and hill-climbing trials.

It is said that the accident to Earp's car was due to the fact that a temporary wire



HOTCHKISS 1904 GORDON BENNETT CAR.

connection between the emergency brake latch and handle broke after the brakes had been so forcibly applied as to skid the wheels. The brakes therefore remained locked when Earp tried to release them. Back of this was an error in management by which the principal competitors in the speed trials were allowed to come up the backstretch together instead of singly. An impromptu race naturally resulted, and the second time this occurred Earp did not slow down soon enough. His car, with brakes locked as described, went slantwise into a stone wall, glanced off, and turned around as it stopped, throwing out the occupants. Neither of the latter seem to have been as badly hurt as at first reported, and the damages to the car appear to have been confined to the wheels, bonnet and radiator. The English press is quite unanimous in declaring that the committee's sudden decision to exclude Earp, whom but for the accident it would have given second place on the team, was over-hasty at least.

### Gordon Bennett Notes.

The German Automobile Club is going at the preparations for the international cup race with German thoroughness and attention to detail. It will erect stands at various points along the course on the Taunus Mountain, the principal ones being at Saalburg Castle, where 3,000 persons can be accommodated. The prices here will be 50 marks a seat, or about \$10, and elsewhere on the course seats will be held at 20 marks.

Arrangements have been made for stopping trains at all railway crossings, and transferring passengers to trains in waiting on the other side of the road, so that the racers will not have to stop.

Private automobiles visiting Saalburg Castle on the day of the race will be required to wait at the army maneuvering field at Oberstedten, three miles distant, whence they can be summoned by telephone when required.

\* \* \*

Tourists visiting Germany *en automobile* at the time of the race may avoid the formality of paying duty at the frontier, and having it refunded on their return, by obtaining from the German Automobile Club or from their home clubs the G. A. C. special badge, bearing the letters "G. B." These are furnished by the G. A. C. to all clubs recognized by them. American tourists can obtain them from the Automobile Club of America, 753 Fifth avenue, New York.

\* \* \*

On June 19, two days after the cup race, the German Automobile Club will hold a race meet in conjunction with the Frankfort Automobile Club at the Oberforsthaus mile race track, Frankfort. The programme comprises the following events:

1. Three Miles.—For motor bicycles started by pedals without cranking.
2. Five Miles.—For alcohol cars of over 400 kilogs. (880 lbs.) and not more than 15-horsepower, with professional drivers.



TURCAT-MÉRY 1904 GORDON BENNETT CAR.

3. Five Miles.—For light cars over 400 kilogs., with single or double cylinder motors up to 14-horsepower, driven by amateurs.

4. Ten Miles.—For alcohol cars of over 650 kilogs. (1,425 lbs.) and not more than 40-horsepower, driven by amateurs.

5. Eight Miles.—For cars of over 600 kilogs. (1,320 lbs.) and up to 24-horsepower, driven by amateurs.

6. Ten Miles.—For touring cars of over 1,000 kilogs. (2,202 lbs.) and not more than 30-horsepower, driven by amateurs. Full touring body for four passengers must be carried.

7. Ten Miles.—For cars of over 600 kilogs. and not more than 60-horsepower, driven by amateurs.

In every event each car must carry one adult passenger besides the driver. For the last event the first prize is the Louis Peter Challenge Cup, now held by Willy Poege. This trophy must be won on a German course twice running before becoming the final property of the winner.

The formula for determining horsepower

## MINNEAPOLIS PARADE A GREAT SUCCESS.

195 Cars of All Types Take Part in Evening Event Promoted by Local Auto Dealers—Mayor and Council President the Guests of Honor—Not a Hitch Occurs.

*Special Correspondence.*

MINNEAPOLIS, May 28.—One of the greatest and most successful automobile parades in the history of the trade wended its way through the streets of Minneapolis to-night, watched by a crowd that packed the entire route.

The parade was given by the Minneapolis Automobile Dealers' Association, and 195 vehicles were in line. The showing would have been much greater had the association enjoyed the co-operation of the Minneapolis Automobile Club. For some reason this was lacking, and several of its most prominent

of a mile the machines occupied positions on the side streets. The arrangements in this particular had been carefully planned and executed. The machines were grouped according to makes, which were assigned to certain streets. The drivers clearly understood this arrangement, and it prevented any hitch in the parade.

The first section was rather unique. It was led by Superintendent of Police Conroy in an Oldsmobile, and was followed by a platoon of police, who occupied three similar machines. Then came the *Journal* band of forty pieces, in the *Journal* car "Seeing Minneapolis," and six large pleasure cars. The drum major at the head had a car to himself, and, facing the band, kept as accurate time with his big baton as if the band had been on foot. The director of the band occupied the front car, and kept excellent time for the boy musicians.

Mayor Haynes and D. P. Jones, president of the city council, occupied the positions of honor immediately behind the band. They rode in an electric victoria.

Then came the section of Knox machines, marshaled by W. H. Wheeler. These were followed by Pope-Toledos, headed by A. F. Pillsbury. The Haynes-Asperson cars were led by Dr. C. E. Dutton, and the Locomobiles by Warren Walker. The Wintons were marshaled by H. Wiles, and then came the big Peerless machines, led by John Nelson. H. S. Haynes led the Whites, Ralph Bagley the Packards, A. F. Chase the Yales, J. J. Barslay the Premiers, G. W. Benz the Franklins and Nationals, E. P. Osborn the Autocars, L. H. Fawkes the Ramblers, Mr. Snider the Pope-Hartfords, and Alderman F. L. Schoonmaker the Cadillacs and Oldsmobiles.

Many women occupied the cars and their presence gave the affair something of a social character.

None of the vehicles was decorated; in fact, it had been understood that anything of this kind or anything in the nature of advertising should be strictly eliminated.

The crowd that witnessed the affair was a very orderly one. Very few police had been assigned to the streets, and it is rather surprising that in their absence such good order was maintained. Although the spectators crowded far into the street along Nicollet avenue, they fell back to the curb as soon as the head of the parade appeared.

The speed maintained through the run did not exceed seven miles an hour, even the largest cars being held down to this slow pace. The quiet and smooth running of most of the big machines elicited much favorable comment among the unsophisticated who had not kept abreast of the improvements of the past two years. Some machines were absolutely noiseless. Every machine that started completed the run.

The dealers are so pleased with the success of the parade that they have practically decided to take the initiative in other automobile events in this city.



POLICEMEN LEADING MINNEAPOLIS AUTOMOBILE PARADE, MAY 28, IN OLDSMOBILES.

in these races is to be, for gasoline motors:

$$H. P. = 3.2 d^3 n s,$$

in which  $d$  is the diameter of bore in metres,  $n$  is the number of revolutions per minute, and  $s$  is the stroke in metres. The above is for one cylinder only, and is equivalent to

$$H. P. = .00053 d^3 n s$$

where  $d$  and  $s$  are taken in inches.

For the alcohol races, using the ordinary methylated spirits (beet or potato alcohol denaturated with a small percentage of wood alcohol, and having about 6,500 calories of heat value) the formula becomes  $H. P. = 3.18 d^3 n s$  per cylinder.

ALBERT CADIEUX, of Grosse Pointe Farms, Mich., has applied to council for permission to operate a thirty-passenger automobile bus between the country club and Macomb county line.

officials and members did not even participate. The dealers have expressed themselves as not a little disappointed over the lack of interest manifested by the club. But, nevertheless, the parade was a huge success, and not an accident occurred to mar the event. Everything went as planned.

The parade started at Park avenue and Twenty-eighth street, and continued from there to the business district, where the biggest crowd was gathered. At Nicollet avenue and Washington street the throng was nearly as dense as when President McKinley drove through the same thoroughfare three years ago. It was not only a surprise, but a source of much gratification to the dealers to note the interest that had been aroused among all classes.

Harry E. Pence, a leading dealer, was grand marshal. Before the start at 8:30 p. m. he was darting up and down the avenue, seeing that everything was in readiness for the start of the cavalcade. For a distance

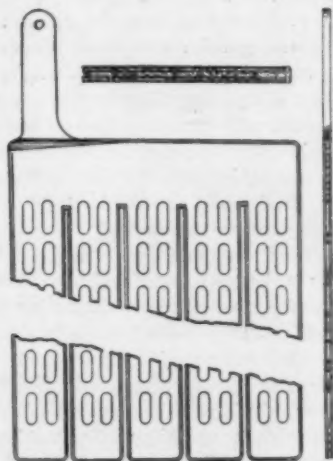


# Patents

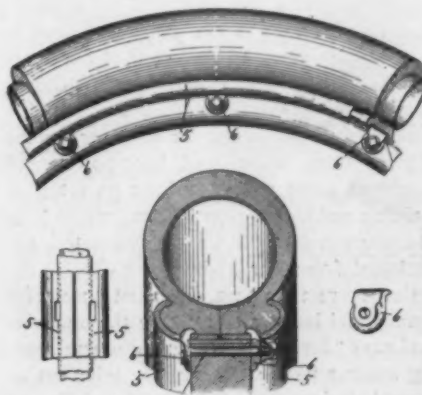
## Pneumatic Tire and Rim.

No. 760,285.—H. Watkins and W. A. Menge, of Utica, N. Y.

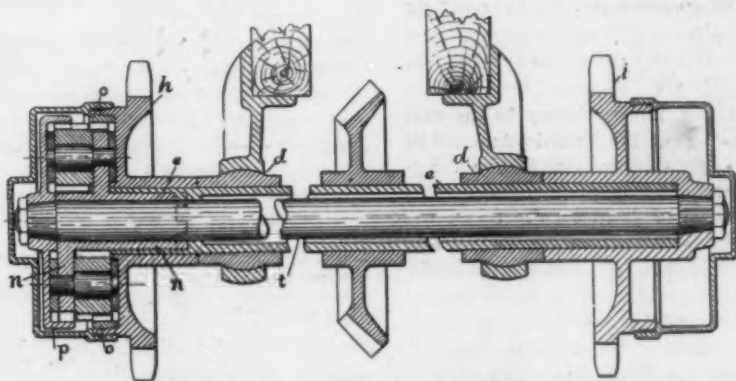
A rim split centrally into similar halves or sides 5 5, each of which is folded up to hold one edge of the tire. These rim halves are loose on the felly, and are secured thereto by clips 6 6, whose ends enter slotted holes in the rim and which are secured to the felly by bolts 8. To remove the inner tube, the nuts are unscrewed from



MEYGRET STORAGE BATTERY PLATE.



WATKINS-MENGE TIRE AND RIM.



HOWE UNDIVIDED COUNTERSHAFT AND DIFFERENTIAL GEARING.

the bolts and the clips and rim on one side removed. The base of the tire case is split as seen, so that it can be opened to replace the inner tube.

## Storage Battery Plate.

No. 760,897.—A. Meygret, of Paris, France.

A plate in which it is aimed to permit free expansion of the active material without buckling. To this end the plate is slitted lengthwise into narrow strips, each surrounded by raised edges on both sides. The larger views show the unpasted plate, and the small detail is an enlarged vertical section after pasting. The plate is perforated to aid in holding the active materials in place.

## Electric Wheeled Chair.

No. 760,810.—S. S. Scott, of St. Louis, Mo.

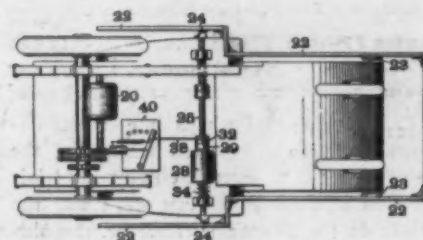
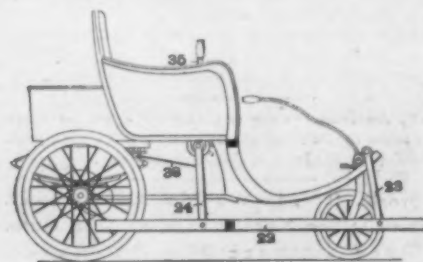
The perambulating chair used at the Louisiana Purchase Exposition. Its special features is the guard rail 22, suspended by the hangers 23 and 24, of which the latter are so connected to the controller 28 that a backward movement of the rail stops the motor. The lower drawing, which is a bottom view of the chair, shows a collar 32 fixed to rockshaft 25. The controller is loose on 25, and is operated partly by 32 through the one-way clutch 29 and under certain conditions by the spring 34, one end of which is fixed. The normal control is by handle 35, and the controller has three

movement. The speed of the chair is of course very moderate, as it is to be operated by totally inexperienced persons.

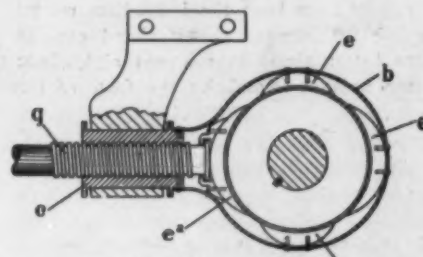
## Differential Countershaft.

No. 760,628.—F. D. Howe, of Bayside, N. Y.

An arrangement by which the common divided construction is avoided, also the need for introducing loose couplings between the center of the shaft and the outboard bearings. The latter, as shown, are carried in spherical seats *d d*, and the differential, of the spur gear type, is enclosed in one sprocket pinion. The bevel driving gear is fast on tube *e*, which drives the central portion *n* of the differential through the clutch teeth shown in dotted lines. The



WORLD'S FAIR ELECTRIC CHAIR.



DILWORTH SCREW ACTUATED BRAKE.

two internal driven gears *o p* are made fast, one to the sprocket pinion *h*, which is journaled on *e*, and the other to shaft *t*, whose other end drives sprocket pinion *i*, also journaled on *e*.

## Brake for Vehicles.

No. 760,853.—O. L. Dilworth, of Norwich, Conn.

A brake having three shoes *e e e* fixed to a band *b*, and a fourth shoe *e2* fixed loosely to a screw *g* turning in a loose nut *c*, to which the ends of *b* are fastened. Rotating the screw in one direction forces *e2* against the brake drum, and tightens the band by the motion of *c*.



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Copies Printed This Issue, - - 12,000  
" " Since January 1, 276,800Where  
Conservatism  
Counts.

Perhaps the most unexpected feature of the French eliminating trials reported in these pages last week was the failure of the *Grande Victorieuse*, the oldest French firm of automobile builders, to secure a place on the cup team. Whatever may have been the immediate reason for the inability of the Panhard cars to score better than seventh and eighth out of ten finishing,—and for the facts of the matter we shall have to await mail advices—the conclusion can hardly be avoided that something more than sporadic mischance was accountable for so wide a lapse from the splendid history of this firm.

It is not usually safe to try to draw the moral before the story is finished; but to one who reads the description of the cars on another page the story seems almost to draw its own moral. In a word, these machines represented radical departures from the long-familiar "Panhard type" in clutch, in gear box design, in the substitution of shaft for chain drive, and therefore in axle design, and—as the photograph shows—in steering knuckles as well.

Now, every one of these radical changes may have been, abstractly considered, for the better: but the point is that, for that particular firm, they were comparatively so many plunges into an unknown sea. Nowadays the fullest measure of success in any branch of engineering work can only come to that builder who, adopting at the first a design of intrinsic merit, develops

and tests and perfects that design, year after year, till he comes to know it in all its strength and weakness better than any other man. Long experience has taught him just where to place each pound of metal, what method of lubrication is most effective in each bearing, what parts tend to work loose, what bearings wear out soonest, where cramping must be guarded against, and just what degree of flexibility gives the freest movement and longest life. These are things that no books or schools can teach, and the most perfect mechanical conception is valueless till fused with the intimate knowledge given by experience.

If we have read the moral aright, it is one which will bear taking to heart in many quarters in our own country. The reason America has produced no International Cup racers is not all to be found in lack of high-grade materials or of engineering skill: it is that experience in building low-priced touring cars does not give the kind of skill demanded for road cars which must develop a hundred horsepower and nearly as many miles per hour on a ton of weight; and this reason will endure so long as these wonderful but useless monsters are excluded from our highways.

But, more than that, the most successful commercial builder will not be the one who is always "flopping," but he whose engineering instinct has led him to the selection of a good design, and who has the ability to develop it steadily, utilizing from year to year his growing store of experience. Of that kind of conservatism we have not yet an oversupply.

The  
Chauffeur  
Situation.

The testimony in the case of the Tuxedo Automobile Co. vs. Dr. J. Grant Lyman, in New York, reported and commented on in our issue of April 23, deserves more than passing attention, for the reason that the underhand practices confessed to by the chauffeur, Dietz, were in reality typical of those followed by a great many chauffeurs in the employ of wealthy owners.

In any other walk of life the men with the antecedents and habits of the average chauffeur would be trusted to a very limited extent; but the rich automobilist, frequently, would sooner trust his chauffeur than be "bothered," and the chauffeur, who knows on which side his bread is buttered, soon learns to take advantage of this fact. His plenary powers in the certification of bills, ordering of supplies and repairs, and use of the car at any and all hours, are to him only so many opportunities put in his way by a kindly Providence, which it were sheer imbecility to waste. What is the use of standing between his owner and the garage keeper in everything, if he cannot turn the fact to account?

Accordingly he demands a "rake off" before he will O. K. the repair bill, and, if the garage protests, he has no objection to the amount of the "rake off" being added to

the bill. Not only does he sell his influence to the highest bidder when his owner is selecting a car, but, soon concluding that to exert any influence at all is too much of an effort, he brazenly demands a commission on whatever car is bought. He takes the car out at night, drives it up Broadway at twenty miles an hour, with a party of servant maids or fellow chauffeurs as passengers, punctures a tire or damages the radiator, and the next day orders the garage to make repairs. And, of course, he gets his little perquisite when the work of restoration is done. No wonder he thinks the world's his oyster!

If the owner, somewhat staggered by the length of the bills engendered by a few months of this sort of fiduciary service, protests to the garage, and is in danger of getting an inkling of the real situation, it is the easiest thing imaginable for the chauffeur to persuade him that the garage management is incompetent, that its repair charges are unreasonable, and that he knows of a rattling good place on Blank street. And forthwith the transfer is made.

This does not overdraw the situation. There are honest chauffeurs, of course; every garage can tell about them; but their frequency seems at present to be in inverse ratio to the means of their owners. As we remarked in our previous discussion, in the last analysis the owner pays all the bills; and until owners are disposed to hold their chauffeurs to at least the degree of accountability that they would a business employe, so long will they continue to be bled, directly or indirectly.

So long as the owners do not take the initiative to better conditions it would be to the interest of the garage owners to organize against graft and rascality, which if allowed to grow will eventually seriously affect their business.

Philadelphia  
Race  
Muddle.

One must heartily regret that a good idea—or the germ, at least, of a good idea—should have been so mangled in the application as was the case in the Philadelphia races last Saturday. It does not even yet seem to be clear whether the new classification by advertised horsepower, announced by the committee five days before the meet, was intended to take the place of the weight classification or to supplement the latter by bringing like cars together. In either case, sprung as it was on the contestants so soon before the race, nothing but confusion and protests could have been expected.

There seems, on general principles, to be little more virtue in a straight horsepower classification than in a straight weight classification, for the former might bring together machines of almost equal disparity in speed. By properly combining the two, however, at least a fair apology for a race might be expected with existing cars. If difficulties are found in the way of de-



termining power by cylinder sizes and engine speed, the plan used at Philadelphia, of taking the advertised or catalogue power, has much to recommend it.



It is to laugh. San Franciscans who may happen to see a late issue of *The Automobile Journal*, published in the big city on the banks of the little ditch called the Thames, will be proud to learn that they live in a "comparatively out-of-the-way part of the world." So our esteemed British contemporary styles the metropolis of the Pacific slope, in a description of a photograph showing a round dozen of White steamers drawn up in line in Golden Gate Park. "The assemblage is distinctly remarkable," says the London authority, because all the cars are the output of one firm and all are collected in the out-of-the-way place. We can fancy some adventurous British motorist of this stripe, after risking his life among the Indians of Buffalo and the Bisons of Omaha and the further West, drifting into the "Poodle Dog" or "Marchands" about the time cosmopolitan 'Frisko goes out to dine and seriously giving forth some such views. Without doubt he would get a hearing and probably an initiation into the mysteries of good old United States rough house at the same time. The Cockney knows his Strand, but there is something doing on Market street all the time that he seems to know little about.



The automobile in which Prince Pu Lun was riding to Lafayette from Indianapolis on Wednesday caught fire and the blaze was extinguished with cans of milk from a passing farmer's wagon. This is another case of the automobilist being milked by the farmer.

#### A. C. A. RACING BOARD.

Arrangements for the Vanderbilt Cup race were discussed at length at a meeting of the Racing Committee of the Automobile Club of America on Tuesday, May 31, but up to the time of going to press it was not considered advisable to make public the details of the conference. It is understood, however, that everything has been satisfactorily arranged, and information on the subject will be given out soon. Rumor has it that the race will not be restricted to American cars, but will be open to the world. The proceedings of the committee with regard to other matters that came up for consideration are also withheld for the present. The decision regarding the classification of cars at the Philadelphia meet is awaited with interest, as it is not known whether the notification last issued, classing cars by horsepower, was supplemental to, or a substitute for the original classification by weight, which is the regular A. A. classification, and therefore whether the races will be declared regular or not.

## COUNTRY CLUB OPENING A BRILLIANT EVENT.

**More than 300 Persons Attend Chicago Club's Evanston House Warming in Fifty Cars and Enjoy a Dinner and Dancing and Moonlight Ride Home.**

*Special Correspondence.*

CHICAGO, May 28.—"A year ago it would have been difficult to get a corporal's guard of the Chicago Automobile Club together; to-night I am agreeably surprised to find nearly 300 assembled at the opening of the country station. The progress made by this club is certainly remarkable."

These were the words spoken by S. A. Miles, general manager of the National Association of Automobile Manufacturers, at the banquet table when he addressed the large gathering of automobilists assembled at the formal opening of the Evanston country station of the Chicago Automobile Club, and the sentiment was re-echoed by every one present. The weather was perfect, the clubhouse was beautifully decorated with flags and bunting and flowers, the fourteen-mile run from the city clubhouse had been made by fifty automobiles without the slightest accident, and the members and guests were in the best of humor. The first social function of the season given by the club was more successful than even the most sanguine had dared to hope.

For two weeks past the house committee, Dr. F. C. Greene and Ira M. Cobe, had spent most of their time buying furniture and supplies, hiring painters and decorators, and sparing neither pains nor expense to make the opening of the country station the greatest event in the history of the club. Their hopes were realized beyond their expectations.

At 2 o'clock in the afternoon the members began to assemble with their cars and friends at the Michigan boulevard clubhouse. In less than an hour more than fifty cars had lined up, and the assemblage began to assume the proportions of the parade crowd of the Saturday previous. At 3 o'clock President Farson gave the signal to start, his car leading the way with a load of Evanston aldermen who were going out to try their new twelve-mile-an-hour speed ordinance and incidentally to break bread with their erstwhile foes. The second car carried Secretary Sidney S. Gorham and a number of newspaper reporters.

More aldermen, more club members and more guests filled the following cars, and all were jolly parties as they bumped across the blocks of cobblestones that have to be traversed to reach the boulevards and smooth drives of the North Side. The run to the country station was made in about forty minutes, which was a little faster than the law allows, but with both Chicago and Evanston aldermen at the head of the procession the speed was not regarded as excessive.

From 4 until 6 o'clock the 300 members in the party looked over the clubhouse from

basement to attic; then they assembled in groups on the lawn and had pictures taken by the amateur photographers, while fifty cooks and waiters hurried and scurried to appease the excellent appetites of the unexpected number.

The immense dining hall, seating more than 200, was decorated with a profusion of roses, while the reception parlors were improvised as an annex to accommodate those unable to secure seats in the main dining room.

President Farson, as toastmaster, welcomed the guests in behalf of the members, and assured the aldermen of Evanston that they had builded better than they knew when they set a wise example for their sister villages along the north shore in enacting more reasonable laws for the government of automobiles.

Responses were made by Mayor Barker, ex-Mayor Patton, and Alderman Seelye, of Evanston, who were followed by Commodore Wilbern of the Chicago Yacht Club, Dr. F. C. Greene and Attorney Ira M. Cobe, representing the house committee; B. H. Marshall, for the directors; S. A. Miles, F. C. Donald, and Sidney S. Gorham of the Chicago Automobile Club, and Alderman Foreman, of Chicago.

The ballroom was crowded from 9 until midnight with dancers, the music being furnished by the Thomas orchestra.

The ride back to the city by moonlight was a delightful one, each party going at will, and by 1 o'clock the clubhouse was deserted, the lights were out, the country station was an established success, and the Chicago Automobile Club had conquered Evanston.

#### GETTYSBURG TOUR ABANDONED.

The spring tour of the Automobile Club of America to Gettysburg, for which such painstaking preliminary work was done in order that the participants might be free from care and annoyance concerning details, started out in a wobbly, uncertain manner from New York last Thursday and fizzled out at Philadelphia on Friday. Messrs. C. G. Wridgway, Emerson Brooks, H. M. Belding, Mr. Joy and R. B. Morrell started in their cars, accompanied by friends, and in a ride that was described as delightful, made the run mapped out for the first day, arriving in Philadelphia without mishap worth mentioning. There the tourists decided to abandon the tour and dispersed. Mr. Morrell, however, continued on the road in his Locomobile touring car. Mr. Brooks was heard from in Atlantic City on Tuesday, but it was not known at the time whether he went by automobile or not.

Secretary Butler, of the A. C. A., who selected the route and made all the preparations for the tour, expressed great disappointment at the lack of interest and the manner in which the affair "petered out." "Those who did not go don't know what they missed," he said. "Everything seemed just right for a splendid tour, but for some reason most of the entries failed to start."

## DELAWARE IS BACKWARD.

The Few Cars Used There Are Mostly Owned in Wilmington.

*Special Correspondence.*

WILMINGTON, Del., May 28.—Automobiling has become popular here, the development in the last few months being marked. This is a bustling city of 85,000 inhabitants, and is growing rapidly, but the motor-car is not used in active business lines, except by three physicians in the city, Drs. J. Paul Lukens, Theodore Becker and H. R. Stubbs, and one on the outskirts, Dr. Joseph Chandler. There are, however, probably a dozen business men, living in remote sections of the city and in the suburbs, who use their cars in going to and returning from business. There are no automobile delivery vehicles, which is probably due to the fact that Wilmington is an unusually hilly city. But notwithstanding the hills, there are many level streets here, with long, well-paved stretches, which are admirable for automobiling, and several turnpikes leading to other places afford splendid opportunities for speeding.

Recently a movement was started by several of the leading business men looking toward the establishment of an automobile passenger service between the heart of the city and Lombardy cemetery, a distance of about four miles. The cemetery is located on the Wilmington and Great Valley turnpike, one of the best roads leading out of the city. A trolley line in this direction has been talked of for some time and one of the local railway companies recently acquired controlling interest in the turnpike company, but no disposition to build a railway on the road has been shown, hence the possibility of the automobile service being established. Should such a project go through it is not improbable that it would extend to the northern terminus of the turnpike at West Chester, Pa., seventeen miles distant.

The thirty to forty machines in use here are of numerous makes, including the Cadillac, Haynes-Apperson, Olds, Rambler, Ford, Buckmobile, Franklin, De Dion (French), and others, including some local makes.

Banks Brothers, automobile dealers and repairers, and George K. Rudert, a jeweler, have made very fine machines, which they use and which have attracted much attention.

Probably the largest users of automobiles are the members of the DuPont family, of powder-making fame. Some of the officers of the company are constant users of machines and have several cars. They are French machines and attract much attention on the streets.

A number of the members of the Wilmington Country Club, which is composed chiefly of business men, own automobiles and almost any afternoon one can see a party starting out from the clubhouse, which

is just out of town on the Wilmington and Kennett turnpike.

There are several places in the city where automobiles are kept and repairs made, one of the most convenient for people passing through being that of the Wilmington Automobile and Garage Co., at 829 Orange street, which is accessible at any hour of the day or night. It is almost immediately in the rear of the postoffice, at Ninth and Shipley streets.

## TWO NOVEL SUITS.

Heavy Damages Wanted for Long Walk Home From Demonstration Ride.

*Special Correspondence.*

WASHINGTON, D. C., May 28.—Two damage suits were filed this week against local automobile companies. The first was that of William Grenfell, by his next friend, F. W. Grenfell, against the Washington Electric Vehicle and Transportation Co., for \$20,000 damages for injuries claimed to have been suffered by him as a result of the negligence of the company. The plaintiff is a child about eight years old. Some weeks ago he was severely burned by some gasoline owned by the company, which was stored outside its garage, at the corner of Ohio avenue and Fifteenth street. The gasoline was thrown upon him by some boys who were playing around the garage, and, becoming ignited, burned the child badly.

The second suit was brought by Dr. S. DeLancy Hicks against the Pope Manufacturing Co. to recover \$25,000 damages alleged to have been sustained by him by the failure of the company to return him to this city after taking him out for a ride in one of its automobiles. In the long bill of complaint Hicks recites that, being desirous of purchasing an automobile and having inspected some of the machines sold by the Pope Manufacturing Co., he was on March 16 last invited by the company's agent, W. J. Foss, to ride in one of its automobiles in order that its merits might be demonstrated to him in a practical way. He accepted this invitation and was taken out in the automobile to a secluded spot twenty-four miles from Washington and left there. Being without money, he was obliged to walk home, and for this he claims to have suffered damage to the extent of \$25,000. This is the second suit Hicks has filed on account of this automobile ride, the first being against a local newspaper.

## INDIANAPOLIS RACES POSTPONED.

*Special Telegram.*

INDIANAPOLIS, June 1.—The automobile races that were scheduled for Monday, May 30, at the State Fair grounds, were postponed on account of rain and will be run June 11, a week from next Saturday.

ALDERMAN BECKER, of the First Ward, and Lonstorf, of the Sixteenth Ward, in Milwaukee, are enthusiastic auto owners.

## HARDLY-EARNED PERMITS.

"Stunts" Required of Applicants by the Golden Gate Park Board.

*Special Correspondence.*

San Francisco, Cal., May 24.—An interesting spectacle is enacted in Golden Gate Park every Tuesday afternoon from 2 to 5 p. m., when new owners of automobiles take their examinations to obtain permits granting them the privilege of driving in the park.

If the day is pleasant many motorists on their way to the beach will line up at the side of the boulevard to watch the beginners do their stunts. In some cases, however, the applicants are not novices, but show great skill in avoiding dummies which are thrown before the machines.

The operators sit alert and nervous at the wheel as they speed down the drive, knowing that at any minute they may have a dummy thrown directly in front of the wheels. The way some of the women handle the steering wheel and brake as they swerve to one side when the flying dummy strikes the ground in these trials is surprising and causes no little comment and praise from the onlookers of the fair sex.

The commissioner who has charge of the examinations takes the front seat of a car with the subject to be examined and instructs him to "let her out." They shoot down a good grade with a sharp turn and then climb back, the motor all the while exerting itself to its utmost. Next, they may be seen executing turns to the right and to the left, in rapid succession and of as small radius as the front wheels permit, the car making figure eights on the driveway. Their next move is to follow a small footpath not more than five feet wide that runs out among the densely wooded or wild section of this beautiful park. Then, leaving the path, they make a turn or two among the trees and back out again on reverse gear. This part of the test is most difficult and requires a steady hand and quick action.

These feats having been performed, the commissioner dismounts from the machine and resumes his position at the side of the road with the dummy in hand. The dummy seems to be filled with sand and is no small obstruction. The number of close calls it has passed through without injury is surprising, and ought to be reassuring to pedestrians.

Motor cyclists are required to pass through much the same ordeal as the motor-car owners. One of them recently expressed to the writer the conviction that if he "ever struck that dummy it would be all off" with him.

The trials, although somewhat strenuous, earn for the motorist the right to point with pride to the evidence of his adeptness in the form of bright new numerals of his permit swinging at each end of his car.



## PRELIMINARY SPECIFICATIONS.

Adopted for Union Engineering Building and Engineer's Club in N. Y.

The joint committee representing the American Society of Mechanical Engineers, the American Institute of Mining Engineers, and the Engineers' Club, which bodies will occupy the Wixon engineering building and new club building, to be built by Andrew Carnegie, in New York, has announced the preliminary specifications for these structures, from which the following points are of general interest:

The engineering building will occupy lots 25 to 33 West Thirty-ninth street, and the club building, the abutting lots, 32 and 34 West Fortieth street. The available ground space of the former will be about 10,500 square feet, and of the latter about two-fifths as much. The cost of actual construction for both buildings, not including taking down the buildings now standing, or the cost of decorations and furniture, will be about \$1,000,000. It is especially intended that the side and rear walls shall suit the front walls, and not appear like a section of an unfinished block.

The engineering building will have a joint library, of a capacity for 300,000 to 400,000 volumes, and separate reception rooms, and offices for each of the three societies occupying it. The three top floors will be devoted to similar rooms for other technical societies who may hereafter be invited to make use of them. Below the offices and library will be a large auditorium, seating 1,500, and six smaller rooms for lectures, besides a smoking room, which may be used for dinners. The ground floor will be devoted to administrative offices.

The heating and lighting plant will occupy about 3,600 square feet, and the auditoriums will be mechanically ventilated. The coal will be delivered to pockets, preferably under the floor of a central court, which could be used for all shipping purposes of both buildings, and from these is to be fed mechanically to mechanical stokers under the boilers. The ashes likewise will be mechanically handled.

The Engineers' Club building is to be eleven stories high, besides the basement and sub-basement, which will contain the power plant, store rooms, wine cellar, barber shop, etc. On the main floor is to be a café, an office, and a small reception room, besides coat room, etc. The second floor will be devoted to the club room and library; the third, to a billiard room and board, committee, and card rooms; the next six floors to bedrooms, which so far as possible will be arranged in pairs, with bath between, with public bath, shower, and toilet rooms on each floor. About 60 bedrooms are to be provided, none less than 150 square feet in size. The two highest floors will contain a breakfast room, private dining rooms, and a banquet hall. Under the roof will be the servants' quarters.

Six of the leading architectural firms of

New York have expressed their intention to compete in furnishing designs, which are to be submitted, on or before June 20, to the secretary of the joint committee, Prof. Frederick R. Hutton, of Columbia University.

## A 12-MILE LIMIT IN CHICAGO.

*Special Correspondence.*

CHICAGO, May 28.—W. H. Arthur and R. B. Mason, assistants to the corporation counsel of Chicago, have agreed that they will recommend a maximum speed of twelve miles an hour in the new automobile ordinances which they are now preparing. They also say that they are not now concerning themselves with the numbering and licensing features, but as soon as they are ready to submit an ordinance having to do with these subjects they will submit a draft to the attorney of the Chicago Automobile Club for his approval.

President W. W. Tracy, of the Lincoln Park board, although unauthorized to speak for the board as a body, expressed himself as of the opinion that the Lincoln Park numbering ordinance will not be enforced until further action by the city. President John D. Bangs, of the West Park board, says that the sentiment of his board is against the enforcement of its numbering ordinances, prior to the amendment of the present city ordinances or the adoption of new ones. Superintendent Foster, of the South Park board, has not received any instructions to enforce the numbering ordinance in Washington and Jackson Parks.

## FORCED N. Y. LAW VIOLATION.

Gov. Odell's Failure to Provide Funds May Cause Motorists Trouble.

*Special Correspondence.*

ALBANY, June 1.—There have been sent out from the Secretary of State's office during the last few days no less than 1,200 official automobile registration and identification seals to owners in New York and neighboring States. About 600 of them were for automobiles that had never been registered before, and 600 were in exchange for the certificates required under the old law.

Owing to the signing by Governor Odell of the Hill automobile bills which established the new law and repealed the old law more than a week before he permitted the \$10,000 item in the supplemental supply bill for the purchase of seals and badges to become available by signing that measure, half the motor-vehicle population of the State will, after June 3, through no fault or negligence on its part, be driving their automobiles in express violation of the law.

The Secretary of State was unable to get any of the seals and badges out until last Friday, when the first of the first lot of 1,200 were sent out. Some of these went out of the State, as for instance seal No. 10,037, which went to Richard J. Baker, of Providence, R. I. All below that number have been reserved for the 10,000 and odd owners of automobiles who had certificates under the old Bailey law so that they may have their old numbers on their new seals. The penalty provisions of the new law go



"COMET" EIGHT-CYLINDER, AIR COOLED, RACER.—Built in Indianapolis.

The light racing car shown above has just been completed by the Marion (formerly Premier) Motor Car Co., in Indianapolis, and is the first eight-cylinder air-cooled car ever built. It is to be driven in track competition this season by Harry Hammond, who is seated at the steering wheel. No description has yet been furnished by the makers, but it is evident from the photograph that it is only a track car, having no rear springs, and apparently no change speed gearing or differential. At the front it has only a transverse spring to relieve the engine from very severe shocks. The frame is of pressed steel. The operator sits on the left side, where his weight counteracts the centrifugal force when rounding turns and where the driver can also steer better close to the inner fence. The first appearance of the machine in competition will be in Indianapolis, June 11.

into full effect June 3, when the old certificates and numbers become valueless. The Secretary of State has been unable to get out even the first 5,000 and the rest of the 10,000 owners will be technical violators of the law if they operate their machines on the highways. Up to date no chauffeur's badge has been issued and, as already stated, only 1,200 old and new owners have been given their credentials.

Mayor McClellan, of New York City, sent in his old certificate early and received seal No. 9,735. No application from the holder of certificate No. 1 has been received, but Mason C. Allen, of Sandy Hill, who got No. 2 certificate in 1901, sent it in and has been furnished with No. 2 of the new seals.

It will probably be a month or more before all the old certificates have been exchanged for the new seals and the applications for seals for vehicles not previously registered can be attended to.

There is no saving clause in the law to protect the motor-vehicle owner or chauffeur who has duly made application and sent in his fee, but who, through delay in the office of the Secretary of State, has received no seal or badge. This delay will make involuntary and unwilling violators of the law out of many law abiding citizens, and only the forbearance of police and court officers will stand between them and arrest and imposition of fines.

### CANADIAN LEGISLATION.

#### Licenses Now Required in Montreal. Speed in Quebec Province 8 Miles.

*Special Correspondence.*

MONTREAL, May 28.—The first automobile license numbers required by the new law were issued from the City Hall a few days ago, No. 1 being secured by U. H. Dandurand. Several requests have been made for this number. Twenty licenses have been given out to date, but this does not indicate the number of machines sold here, as a large number were sold and delivered out of town. After May 31 all owners of machines who have not paid the license fee will be arrested when using their cars in the streets and brought before the court. It is estimated that 100 tags at the very least will be issued. Instructions in writing accompany each license directing that the number of the license be affixed to the back of the vehicle. The tags are black with gilt figures, over which the word "Auto" appears.

Petitions are in circulation praying the city council to forbid automobiles using the Mountain Park driveways. This petition is being signed largely by people who own horses and carriages. They claim that the automobiles scare the horses, and as some parts of the roadway are close to the precipice, serious accidents may result. Automobiles are not allowed on the mountain after dark.

A by-law has been passed by the city council limiting the speed of automobiles to

six miles an hour, with a fine for violation not exceeding \$40 or imprisonment in case of default for two months.

#### SPEED LIMIT IN QUEBEC EIGHT MILES.

Mr. Walker, member of Parliament for Huntingdon, last week had a bill before the Legislature now in session in Quebec providing that every person driving an automobile along any public thoroughfare shall at the request of or upon signal by putting up the hand from a person driving or riding a restive horse or horses or driving domestic animals, whether in the same or in an opposite direction, stop the automobile immediately and remain stationary, and upon request shall stop the engine so long as may be necessary and to allow the horses or domestic animals to pass. A penalty not exceeding \$20, or in default of payment imprisonment not exceeding one month, was provided. The bill was amended in committee by striking out the clause to compel drivers of automobiles to immediately stop their motor carriages, et cetera, and by fixing the rate of speed on country roads at eight miles an hour. It was then read the third time and passed.

The initial visit and tour of inspection of the new police committee to the various police stations throughout Montreal was made this week in eight automobiles, which were put at the disposal of the committee by the Eastern Automobile Co. The chief officers and several newspaper men were in the party.

J. P. Tisdale, of Clinton, Ont., recently purchased from the Canada Cycle & Motor Co., Ltd., of Toronto, a Ford touring car, and desired that the machine be delivered in Clinton by the following night. It was impossible to do this in time using the railroad, so the car was started over the road from Toronto at 9 a. m. the following morning and arrived in Clinton the same day at 8:30 p. m., having accomplished the distance of 130 miles in 9½ hours, allowing for a stop of two hours and a half for supper, and a few social calls. This is the second record within the week for a Ford made over the none too good Canadian roads.

#### DAMAGE SUIT DISMISSED.

*Special Correspondence.*

KANSAS CITY, May 28.—A suit for \$50,000 damages brought by Samuel J. Roberts against Lee Clark for injuries alleged to have resulted from being run into by the defendant in his automobile April 16, 1903, was dismissed in the Circuit Court recently by consent of the attorneys for the plaintiff.

Roberts brought action through his guardian, Samuel R. Roberts, alleging that the plaintiff was run over by Mr. Clark's automobile in this city on the day named and that he had become insane as a result of his injuries.

Mr. Clark, who is vice-president of the Interstate National Bank, testified that he was driving along Oak street, on which there is little traffic, at a speed of from four to six miles an hour, having slowed

down as he approached a busy crossing at Twelfth street, and that as he turned out to pass around a wagon one of the front wheels of his runabout struck a rut in the asphalt, which caused the steering lever to be jerked out of his hand. The machine veered toward the sidewalk and struck Roberts.

Other testimony developed the probability that the plaintiff might have become insane as a result of diseases from which he was suffering and which were entirely independent of the accident. Clark gave a straightforward account of the affair and also narrated how he had refused to be mulcted in a settlement proposed by Roberts.

Suit may now be brought against the city by Roberts on the ground that the city was negligent in not repairing the rut in the pavement.

#### SUES CITY FOR OBSTRUCTED STREET

*Special Correspondence.*

WILMINGTON, Del., May 28.—Dr. Harvey B. Patton, of Wilmington, has instituted a suit for damages against the mayor and council, claiming that he was injured as a result of the city's negligence. The doctor and Leslie Cook, a friend, were riding in the former's automobile at about midnight about six weeks ago over a roadway in Cool Spring Park and the machine collided with a pile of earth, which, it is claimed, was not properly marked with a light. Both of the occupants were injured and the vehicle was badly damaged. The case will probably be called at the September term of the Superior Court.

#### MATHESON TO MOVE TO DETROIT.

*Special Correspondence.*

DETROIT, May 28.—As a result of the efforts of the Detroit Board of Commerce, composed of the representative business men of the city, The Matheson Motor Car Company, formerly of Grand Rapids, but now of Holyoke, Mass., has announced its intention of coming to Detroit to locate. When it was learned a short time ago that the company intended to build up a large western plant, Detroit and Grand Rapids each offered inducements. The Detroit invitation was accepted. Before the Detroit invitation was extended a special committee from the Board of Commerce, headed by Secretary Ryerson Ritchie, went east to inspect the Holyoke plant of the company, and reported favorably. The Matheson company succeeded the Holyoke Motor Works, one of the early auto manufacturing companies. The specialty of the Matheson company has been a four-cylinder touring car.

Tom Cooper, the Detroit racing man, is negotiating with the Matheson company for a high-powered racer, with which he hopes to beat Vanderbilt's mile record next year.

The Board of Commerce is taking up the automobile industry in earnest and going into its various phases in a businesslike way, as the board recognizes the great possibilities in its development.



## GRADUALLY PLACING WORLD'S FAIR EXHIBITS.

**Bad Freight Congestion in East St. Louis Responsible for Incomplete Automobile Display at Exposition—Motor Transit Companies Doing Good Business.**

*Special Correspondence.*

ST. LOUIS, May 28.—The automobile display in the Transportation Building at the World's Fair is being installed gradually. The delay is not the fault of the exhibitors. All cars were shipped promptly for opening day, but more than 100 have been held over in East St. Louis for two to six weeks. High water, lack of bridge facilities, and graft are the causes of the delay. Pittsburgh, in sending on her exhibit, took the energetic initiative of expressing the car. It left the Iron city at 9 p. m. and reached the World's Fair grounds building in just 36 hours. Some of the booths haven't a single car on exhibition, though all were shipped months ago.

The display when completed will be the most popular section in the Transportation Building. A look through the section shows that in exterior finish the American cars are superb. The Peerless cars with side-door entrances are much in favor. George K. Kobusch, of the St. Louis Car Company, at once ordered one of these makes, as did also John H. Carroll, Samuel Cupples, and Peyton Carr.

### INTRODUCING HIGH-POWERED AUTOS.

This fair is introducing high-powered and high-priced motor cars throughout the West. Charles Shanks reports a good business in Wintons. The foreign section is also very popular. Three months ago there was only one imported automobile in St. Louis. Each week now sees foreign machines on the streets of the Missouri Valley metropolis. St. Louis and cities farther west have the money to buy as high-priced cars as are manufactured. Other difficulties are not insurmountable and orders are being taken for scores of American and French motor cars for the West.

The Japanese now in St. Louis have become enthusiastic regarding the motor machines and have given a large order to be shipped to Tokio.

M. Michel Lagrave, commissioner general of the French Republic, has two handsome imported cars which he uses constantly. They are Darracq and a De Dietrich.

The 80-horsepower De Dietrich used by Charles Jarrott, the English motorist, will be brought to St. Louis next month. The machine will be driven by Maurice Friedlander in the St. Louis races. A number of local races will be planned during Automobile Week at the Fair. Among them will be a run to De Sota, Mo. This will include the steep inclines of the Ozark Mountains and furnish diversion for all enthusiasts.

### PUBLIC MOTOR CARS WELL PATRONIZED.

The auto buses at the Fair are crowd-

ed with sightseers. Visitors use them through the main thoroughfares in preference to the intramural railroad. Besides the electric brakes, a large number of private cars are permitted through the grounds. Whether this will be allowed later is a question; probably automobiles will be permitted only through certain portions of the Fair, principally the outer drive and through the States' Plateau.

The auto transit companies to and from the Fair Grounds carry a full quota of passengers. The street car traffic is already becoming congested and the motor buses offer a quick, comfortable trip. One commissioner from Europe said: "I took the Olive street car line, and in four weeks I have only had a seat twice. Now I keep to the motor buses; they insure a seat and breathing space." The automobile is doing good work for the fair and in return the exposition is exploiting the motor car in a remarkable way.

These are busy days for the policemen in St. Louis. They are planning a hot campaign for the local motorists who exceed the speed limit; but it takes an automobile to catch an automobile and the force is getting prices on runabouts to "run down the offenders."

The dealers in St. Louis are handicapped by their inability to get cars from the factories as fast as they are demanded. New agency companies with new makes of cars are starting up and consequently nearly every sort of motor car is for sale in this city. At the rate licenses are now being taken out, it is estimated that 1,000 St. Louisians will own machines before the summer is over. Many Easterners are having their cars shipped West.

### KANSAS CITY-ST. LOUIS ROUTE.

*Special Correspondence.*

KANSAS CITY, May 28.—The local contingent which will attend the St. Louis Fair has decided on the most satisfactory route to be followed across the Missouri. The start will be made August 7 from Kansas City. Several Denver motorists, who will tour across Kansas, will join the party here. The Coloradans do not fear the businesslike cyclone, which used to blow even the cellars away, for cyclones have rather gone out of fashion.

The roads to be followed on the tour are, with the exception of perhaps thirty miles, ordinary country dirt highways. For about thirty miles out of Kansas City, the pavement is macadam. Probably twenty machines will start from here. The route in detail follows:

#### ROUTE OF THE KANSAS CITY-ST. LOUIS WORLD'S FAIR TOURISTS.

Day.	From	Noon Stop, Miles.	Night Stop, Miles.	Total Miles.
First.....	Kansas City.....	Odessa.....42.5	Marshall.....50.5	93.
Second.....	Marshall.....	Boonville.....30.5	Columbia.....25.5	65.
Third.....	Columbia.....	Williamsburg...40.5	Warrenton....39.75	80.25
Fourth.....	Warrenton.....	St. Charles....45.	St. Louis.....25.	70.
				308.2

### MILITARY AUTO CAR.

If Major Davidson, of the Northwestern Military Academy, does not solve the problem of the automobile military wagon, it will not be for lack of persistence or of faith in the virtues of steam. The photograph herewith shows the latest production of this class from Highland Park, Ill. Evidently it is primarily a rapid-fire gun mount, rather than a despatch carrier. It has a triangular underframe, with the motor, apparently, carried directly on the rear axle. The boiler is inside the sloping bullet shield in front. It is of generous size, and has a Dayton burner and generator. Under the backless dos-a-dos seats (if that be not a contradiction in terms) are the tanks, and probably storage space for tools and ammunition as well. The steam gauge is supported half-way up the steering column, and the water glass is in plain view.



STEAM AUTOMOBILE GUN CARRIAGE.

"New York" semi-solid single-tube tires are fitted.

It would seem that the military value of the machine is to be found rather in its speed than in any other qualities, since it would be nearly helpless if not protected, and is moreover largely dependent on the highways. In riot work it should be very effective.

The car is on exhibition at the World's Fair in St. Louis.

### RACES AT HARTFORD.

*Special Correspondence.*

HARTFORD, May 30.—The Hartford Automobile Club held its first race meet at Charter Oak Park to-day, and although the weather looked threatening, there was a large attendance and the meet was a success. W. H. Pickens' car, the old Ford "999," was sent after the track record of 4:44 for five miles, but it failed to get within measureable distance of that figure, making the five miles in 6:59. Jed Newkirk, an ex-

bicyclist, drove the car. The other events were as follows:

Three miles, single cylinder cars under 8-horsepower—Mr. Warner (Buckboard), first; Mr. Tomlinson, second; Mr. Chesney, third. Time, 6:51¼.

Two-mile exhibition—Walter J. Zeigler, Time, 3:10.

Five-mile motorcycle race—Mr. Coates, first. Time, 6:34¼.

Three miles, light steam cars—W. C. Russell, first. Time, 7:08½.

Two-mile exhibition, electric—H. Alden. Time, 3:27¾.

### KNIGHTS TO RIDE IN AUTOS.

#### *Special Correspondence.*

PORTLAND, May 28.—Maine automobilists will participate in what it is hoped will be the biggest automobile parade the State has ever known, on June 1, when many owners of machines will be present in Lewiston to take part in the parade of the Knights of the Golden Eagle, who will be entertained on June 1 and 2 by the castles of that order in Lewiston and Auburn.

It is planned to give the visitors a rousing time, with entertainments of all kinds. One of these will be an automobile ride on Wednesday. Invitations to take part have been sent to owners of machines in all parts of the State and enough have signified their intention of being present to insure its success. The committee in charge of the affair has secured the promise of a number of the best machines in Lewiston and Auburn to carry the supreme officers. Many of the vehicles will be decorated.

### AUTO RIDE FOR CONVENTIONERS.

#### *Special Correspondence.*

BOSTON, May 28.—An interesting one-day automobile trip was taken by a party of about 100 women this week, in automobiles provided largely through the courtesy of the local garage managers. The women were the wives and daughters of the delegates to the four-day convention of the National Electric Light Association. Their trip was to the Wayside Inn in Sudbury, thence to Concord and Lexington, where they saw the famous battlegrounds of the Revolution, and came home over the equally famous route followed by the British on their memorable retreat to Boston.

The party started from the hotel at 10 a. m. Thursday over the Newton boulevard to Sudbury and reached Boston on the return late in the afternoon. About forty cars, most of them of the tonneau type, were required for the passengers.

THE MAP of the St. Louis tour route, which is being prepared by F. E. Wheeler, of Chicago, will be ready for delivery about June 20. Mr. Wheeler has the portion of the route from South Bend, Ind., to St. Louis. Detail maps of Southern Wisconsin will be ready about June 1.

## CLUBLAND

### NEWS NOTES OF THE CLUBS.

CHICAGO.—The Good Roads Committee of the Chicago Automobile Club is planning to introduce a bill at the next meeting of the general assembly of the State of Illinois providing for State aid in road building, which will be similar to the laws of a number of the eastern States. H. W. Austin, a member of the committee, is a member of the general assembly, and it is expected that through his efforts and influence the bill will be passed. The chairman of the committee, Sidney S. Gorham, is also endeavoring to secure some legislation in the city along the line of better and cleaner city streets.

MINNEAPOLIS.—The Minneapolis Automobile Club held its annual meeting May 24, and re-elected the following officers: President, E. J. Phelps; vice-president, George C. Christian; secretary-treasurer, Robert G. Hastings. The new board of trustees is composed of A. F. and C. S. Pillsbury, Asa Paine, C. E. Dutton, W. N. Chute and Swan J. Turnblad. The club decided to place the machines of its members at the disposal of the mayor, and city council on June 6, when the Liberty Bell is to be on exhibition in this city. The autos will be used to show the mayor and councilmen of Philadelphia about the city. A committee was also appointed to make arrangements for a hill-climbing contest to be held Saturday afternoon, June 4.

NEWARK.—C. S. Wells has been elected secretary of the New Jersey Automobile and Motor Club, to succeed William A. Stimpson, resigned. At the regular meeting May 23 the club's attorney, John R. Hardin, said that the feeling against automobiles was rapidly disappearing and that sentiment slowly but surely would grow in favor of the automobile, as it did with the electric car. A number of committee appointments were announced, including a committee on club runs and tours, which will have charge of the parade scheduled for later in the season. All members of the club will be warned by postal cards not to exceed the speed limit in Chatham, where many Newarkers have been arrested recently.

COLUMBUS, Ohio.—Dr. C. M. Taylor, president, and C. A. Howell, secretary of the Columbus Automobile Club, called upon Mayor Jeffrey a few days ago and complained of the reckless manner in which professional chauffeurs violate the speed ordinance, for which the members of their organization receive a large part of the blame. The chauffeur employed by Governor Herick was mentioned as being the most reckless driver in the city. The mayor was interested in the matter and said he felt that the prominence of the owners of machines does not give their operators license to violate the laws. The officers of the club also

complained of the condition in which the streets have been left by telephone and telegraph companies, waterworks employees and others, which have torn up the paving and failed to properly replace it.

ASBURY PARK, N. J.—The Monmouth Automobile Club is now occupying permanent quarters on Main street, near Monroe avenue. At a recent meeting arrangements were made for its first tour, which will be to Atlantic City early in June. A tally-ho automobile and eight or ten cars of club members are expected to make the trip.

WATERTOWN, MASS.—The Iroquois Automobile Club has leased the house and grounds of the Alvin Adams estate, formerly the home of the Bay State Riding and Driving Club, which will be used as a country clubhouse. The stables will remain as they are, but a building will be erected for the accommodation of machines of the club members and fitted up as a repair and recharging station. The officers of the club are, Howard Tebbetts, president; J. C. MacDonald, secretary.

LOS ANGELES.—The San Gabriel Valley Country Club, of Southern California, intends to build a new clubhouse. It will be ready for use in the Fall and arrangements will probably be made for its joint use by the members of the Country Club and of the Automobile Club of Southern California, as the leading officers of the automobile club are directors of the country club. A boulevard from Los Angeles to the clubhouse is to be constructed. The automobilists of Southern California were discussing the building of a clubhouse on the new speedway to Playa del Rey, but the golf links, tennis courts and other advantages of the Country Club make the joint use of its quarters highly desirable.

TORONTO, Can.—At the first annual meeting of the Toronto Automobile Club, held recently, the reports of a very successful year were read and the following officers were elected for the year: Dr. P. E. Parker, president; W. A. Kemp, vice-president; Charles Webster, secretary-treasurer; F. W. Baillie, W. C. Gurney, A. F. Webster, J. L. Parker, Murray Wilson, A. E. Chatterton, W. F. Turnbull and A. L. Massey, directors. A club run to Oshawa and return, a distance of sixty-eight miles, was held recently, seventy-eight machines being in line.

ROCKFORD, ILL.—At its recent meeting the Automobile Club decided to make permanent headquarters at the Cole Garage, where club rooms will be fitted up. The members will also have use of the garage.

EXETER, N. H.—The New Hampshire Automobile Club has leased for a year the Boar's Head Hotel at North Beach, Hampton, which it will conduct as a clubhouse during the season.

DETROIT.—The Detroit Yacht Club has inaugurated a series of lectures on the motor boat, its construction and operation.



## Current News from New York.

Plans for the six-day motorcycle endurance contest, to be held for the first time under the control of the National Federation of American Motorcyclists, have been practically completed, and embrace the following schedule:

July 2—New York to Albany, following the east shore of the Hudson River.

July 3—Albany to New York, following the west shore of the Hudson.

July 4—One hundred miles paced regularity run.

July 5—Tests in New York City, comprising hill-climbing trials, and starting, stopping and slow-speed trials.

July 6—New York to Wilmington, Del., via New Brunswick and Trenton, N. J., and Philadelphia, Pa.

July 7—Wilmington, Del., to Cambridge, Md., where the annual meet of the F. A. M. will be held on the 8th and 9th.

The awards will be divided into three sections—one for those who compete in the events of July 2, 3, 4 and 5, one for those who compete in the events of July 5, 6 and 7, and one for those who compete in the whole series. The principal prize, a diamond medal, will be awarded to the competitor making the best showing in the last class. Entry fees for this class will be \$5, the fees for the other classes being \$3. Chairman W. R. Pitman, 243 West 45th street, New York, will receive entries up to June 25.

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The work of arresting automobilists goes merrily on, but here is a case where the worm turned. John A. Hill, of New York, a member of the contest committee of the A. C. A., was arrested in Chatham, N. J., on Memorial Day, for exceeding the speed limit, and was fined \$5 and costs. Mr. Hill has taken up the matter, at the request of brother automobilists, and will make a test case of it, his attorney having advised him that his arrest was illegal under the provisions of the Scovel act, which provides for arrest upon warrant only, except in case of racing on the highway for a wager, which Mr. Hill was not doing. The luckless constable has himself been arrested, charged with threatening Mr. Hill with his club and using violent language, and in addition is made defendant in a civil suit for \$10,000 damages. Mr. Hill has appealed from the decision of the justice who imposed the fine, and will carry the case to higher courts. He is represented by United States District Attorney John B. Vreeland, of Morristown. It is said that this will be the signal for a number of similar actions against constables who have been overzealous in their attentions to automobilists.

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The matter of police protection for automobilists was thoroughly discussed at a meeting of the Board of Governors of the Automobile Club of America held June 1, and a plan of action was decided upon.

While the police will not relax their vigilance on behalf of automobilists in all parts of the city, especial attention will be given to the districts where trouble has occurred, and where it is liable to occur again. Plain clothes men will be assigned to these localities, and the matter will be handled with the utmost vigor. The streets where the plain clothes men are to be placed will not be made public, as this would defeat the ends of justice, but motorists will be informed where they may expect to travel without molestation.

Police Commissioner McAdoo is determined to protect automobilists from stone throwing by young hoodlums on the East Side—or anywhere else in New York, for that matter. The difficulty in dealing with the stone-throwing class is that they are as hard to find, once they get away, as rats in a barn. A plan which has been suggested is to send out plain clothes officers in automobiles. These noble fellows will ride about in the danger zone until someone throws things at them, when, presto! the automobilist becomes a raging policeman. At Police Headquarters they are wondering what sort of a time these plain clothes men will have. A bicycle policeman in plain clothes has been patrolling Seventh avenue, but his work has been confined to the arresting of automobilists for fast driving. Plans for the protection of automobilists have been discussed, but the authorities are reticent, believing it better to refrain from advertising the schemes decided upon.

On May 26 three detectives from the West Forty-seventh street Station captured a gang of nearly a score of boys who were caught in the act of throwing stones at automobilists. They were allowed to go after having been thoroughly frightened. The detectives were making the rounds of the district in an automobile.

\* \* \*

A rather curious incident occurred recently on Central Park West, and two men came near to clashing as a consequence. A light steam runabout was left standing at the curb by the owner, and shortly afterward a buggy was driven up and the horse tied up a couple of yards in the rear of the steamer. Becoming a little restive, the animal kept moving forward until quite close to the automobile, and, while pawing the pavement, struck the pneumatic tire with a sharp-edged shoe. About ten seconds later the inner tube, forced through the gash, burst with a loud pop and a sharp fizz, which so startled the horse that he attempted to run. Being unable to get away, he reared and pranced for a moment, but was caught and quieted by a bystander. Just about this time both owners appeared and for a moment it looked as if sparks would fly, the horse driver finding part of his harness broken and the automobilist finding his

tire flat. However, as it did not seem to be any one's fault peace was soon restored and the two assisted each other in making repairs.

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The settlement of the country club problem for the coming season by the committee of the Automobile Club of America, has given general satisfaction. Both the yacht clubs with which arrangements have been made are within easy motoring distance from the city.

The Manhasset Bay Yacht Club house is twenty miles distant from Manhattan, by road, and the American Yacht Club is distant thirty miles, the roads in both cases being excellent. The club house at Milton Point will not be opened until Memorial Day; the other is now in commission. The members of the A. C. A. who own auto boats, and those who expect to own launches this summer, are particularly pleased with the selection of the Manhasset Bay club, as there is an official measured mile for speed testing in the bay, and there is an excellent opportunity for some fine power-boat racing. The course of the American Yacht Club will also be available for racing. The A. C. A. has not given up the plan of erecting a country club house for itself, but the present arrangement will be an extremely agreeable one for the summer and will give the committee ample time to go carefully into the matter of permanent country quarters.

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The regular monthly meeting of the executive committee of the National Association of Automobile Manufacturers was to be held in St. Louis on Wednesday, June 1, for the transaction of routine business.

\* \* \*

The first run of the Richmond County Automobile Club was held Sunday, May 29, over the best roads of Staten Island and under perfect weather conditions. The day's outing was brought to a pleasant conclusion with a dinner at New Dorp Beach. There were seventeen cars in the run, and not a single untoward incident marred the harmony of the day.

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An effort is being made to secure an appropriation for laying asphalt blocks in St. Nicholas avenue, Manhattan, from 155th street to 181st street. It is now paved with this material from 124th to 155th streets, and will shortly be paved from Central Park to 124th street, and from 181st to 196th streets. When completed, this will afford a fine route for automobiles from Manhattan northward, as the avenue is very broad and, up to 168th street, where it merges into Broadway, free from trolley lines. It also affords the only route to Lafayette Boulevard and Washington Bridge, by which an excessive grade to Washington Heights can be avoided.

The officials of the bridge and building department of the Chicago & East Illinois Railroad are now using automobile railway inspection cars.



## NEWS AND TRADE MISCELLANY



Boston capitalists are forming a company for the purpose of operating an automobile touring line at Colorado Springs, Colo.

The Springfield Automobile Co., of Springfield, O., has increased its capital stock from \$10,000 to \$50,000.

The Waltham Manufacturing Co. has recently produced a new Orient Buckboard weighing only 450 pounds. The horsepower has been increased to five.

The Brown cornplanter works, at Galesburg, Ill., are liable to be turned into an automobile factory, according to the Blandville *Star-Gazette*.

The American Wire Washer Co., of Unionville, Conn., is contemplating removing its factory to Hartford, where it will manufacture automobile washers.

A. G. Southworth, of 10 Clinton street, Brooklyn, has secured the Brooklyn agency for the Northern cars, purchasing six runabouts from Peter Fogarty for his first stock.

Deputy Chief Lally, in charge of the fire department of the Borough of Brooklyn, has made requisition for an automobile for use in the discharge of his duties, which requisition it is said will be approved.

J. A. Cramer is now established in his new salesroom and garage, at 737 Main street, Buffalo, where he has fitted up a first-class repair station. Mr. Cramer is agent for the Marr and Ford automobiles.

W. Gould Brokaw has purchased the 60-horsepower F. I. A. T. racer, driven by Fogolin. A counterpart of this car, with touring body, has been ordered from Hollander & Tangeman by L. L. Biddle, of Philadelphia.

Chester Boynton, formerly with the Standard Automobile Co., has accepted a position with the Worthington Automobile Co., corner Fifth avenue and 45th Street, New York. The latter company handles the Berg, Meteor and Bollee cars.

The Fay & Bowen Engine Co., formerly of Auburn, N. Y., is now located in its new plant, at Geneva, N. Y., which is a much larger factory, and will afford ample facilities to meet the increased demand for the company's motors and launches.

The Daimler Manufacturing Co. has opened a salesroom and garage at 10 West 60th street, New York, under the management of Clifford M. Bouggy. The company controls the American patents for the German Mercedes car.

A thirty-horsepower automobile, with a capacity of twelve passengers, will be run regularly throughout the summer between Devil's Lake and the Wisconsin Dells, popular summer resorts for Milwaukeeans and Chicagoans.

The Boston department stores are adopting automobile delivery wagons. Houghton & Dutton are now using nine Knox cars, and in a short time will have twenty-eight of these machines in their delivery service.

The Garford bicycle saddle business, which has been conducted at Elyria, O., by the Federal Manufacturing Co., of Cleveland, has been sold to the Pope Manufacturing Co. By this transaction the Federal company goes out of the bicycle business and will concentrate its efforts in the manufacture of automobile parts.

August Pleiss, of the Schlitz Hotel and Palm Garden Co., has arranged to operate an automobile break in Milwaukee. The machine has a seating capacity of twelve persons, and will be operated regularly for sight-seeing excursions about the city, a booking office for such trips having been established at 455 Broadway.

The Western Tool Works of Chicago is being transferred to Galesburg, Ill., where it will occupy the old plant of G. W. Brown & Co. The capital stock has been increased from \$50,000 to \$200,000. The company will begin operations at its new location with about 100 hands, and will do a general manufacturing business, including automobiles.

When the White Sewing Machine Co. moves out of its garage, at 41-43 Washington avenue, Detroit, to go into its new quarters now building on Farrar street, the Dingfelder Automobile Co., of 958 Jefferson avenue, will occupy them. The Dingfelder works are now about two miles from the center of the city, but the growth of business has necessitated their removal nearer the business center.

### RECENT INCORPORATIONS.

National Battery Co., Buffalo; capital, \$500,000. Directors: R. L. Coleman, W. H. Miller and W. L. Hodges.

Armac Motor Co., St. Paul, Minn.; capital, \$10,000; to manufacture motors, bicycles and novelties. Incorporators: E. W. Keller, A. J. McCollum and H. B. Wheeler.

Union Motor Co., Jersey City, N. J.; capital, \$100,000; to manufacture motors, engines and machines to be operated by gasoline, steam and electricity.

Seeing Washington and Mount Vernon Auto Co., Washington, D. C.; capital, \$30,000. Incorporators: Frank C. Berens, S. Burkart, Emmert and Emil P. Hussbaum.

Empire Auto Car Co., New York City; capital, \$5,000. Directors: Henry Heidelberg, J. D. Wallace and Florence L. Heidelberg, all of New York.

The Motor & Manufacturing Works Co., Ithaca, N. Y.; capital \$25,000. Directors, J.

G. Y. Burkholder, Hamilton, Ont.; David Reid and E. A. Gillette, of Ithaca.

Canton Automobile Supply Co., Canton, O.; capital, \$5,000. Incorporators, R. B. Kuhn, G. A. Leonard, Eunice Hurford, H. S. Belden, Jr., and Robert S. Courtney.

The Maxwell & Fitch Co., Rome, N. Y.; capital \$12,000; to make and sell gas and gasoline engines, vapor gas and automobile parts. Directors, Harry B. Maxwell, Lauren M. Fitch and Christina S. Fitch.

Port Jervis Automobile Co., Port Jervis, N. Y.; capital, \$1,000; to deal in automobiles. Incorporators: P. C. Rutan, F. B. Williams and John A. Rutan, all of Port Jervis.

Rensil Automobile Co., New York City; capital, \$1,000; to deal in automobiles. Incorporators and directors for the first year: C. W. Lisner, H. L. Topplitz, of New York City, and H. J. Richardson, of Brooklyn.

Sterling Electric Motor Co., Dayton, O.; capital, \$30,000. Incorporators: J. A. Gauthier, J. F. Westendorf, George W. Lumby, Rose S. Gauthier and Chas. W. Elliff.

### NEW GARAGES.

MARENGO, Ill.—Henry Chapman has opened an automobile and general machine repair shop in the Alfred Corson building.

PEORIA, Ill.—The Peoria Automobile Co. has established an automobile livery in connection with its other business at 807 Hamilton street.

SPRINGFIELD, Mass.—Lewis E. Warner and Thomas Purseglove has formed a partnership and will conduct an automobile and motorcycle business in State street.

SARATOGA SPRINGS, N. Y.—George L. Gaiser and Harry Teue have organized the Niagara Falls Automobile Transit Co. and opened for business at 339 Riverway, where they will conduct an auto-livery business.

COLD WATER, Mich.—Nettleton & Co. have completed a garage building on Hanchett street. It has storage capacity for ten automobiles, and has an up-to-date repair shop.

EVANSTON, Ill.—The Temple Repair Shop, formerly located in the Park Building, has been removed to its new quarters three blocks north of Maple Avenue, where a complete garage and repair station has been established. The owners of this shop are also conducting a garage and repair station in Edgewood, Ill.

EVANSTON, Ill.—The automobile repair station of John Hanson, in the Park Building, has been purchased by T. S. Ellithorp and M. W. Burt, and has been moved to larger quarters at 1834 Maple avenue, where a repair, charging and storage station will be conducted under the name of the Evanston Automobile Co. The firm will carry a full line of automobile sundries.



